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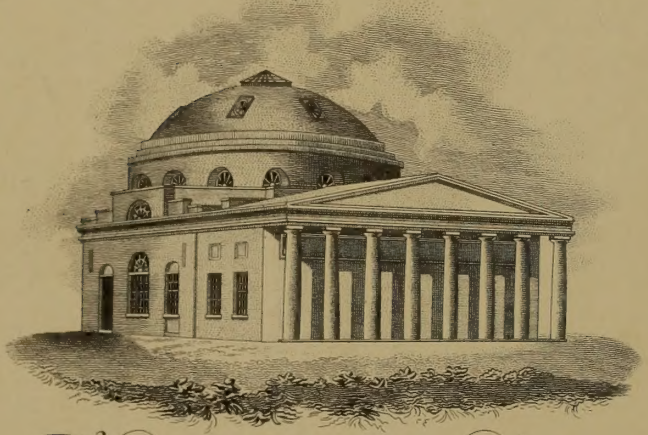

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1859 (a)

Author	Title
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Adler, Lewis	Pneumonia
Cooke, Theodore	Chloroform and its Applications to Surgery and Midwifery
Patrick, Thomas Lewis	Purulent Opthalmia of Infants (Noteworthy Title page)
Adams, William Slaughter	Phthisis Pulmonalis
Eastman, Lewis Machen	Anatomico-Physiological Condition of the Human Eye During Vision [1]
Offutt, Barrack	Pulse
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Doyle, Frederick C.	Dysentery
Clendinen Jr., Alexander	Lachrymal Apparatus
Byrne, Charles C.	Epilepsy

1 Includes diagram of the eye (plate).

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1859 (4)

Clarke, Charles	Chloroform	30p.
Brogden, Arthur	Epilepsy	20p.
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Cooke, Theodore	Chloroform and its Applications to	26p.
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Eastman, L. Machen	Anatomico-Physiological Condition of the Human Eye During Vision	35p.
Offutt, Barrack	The Pulse	16p.
Currey, James J. Hamilton	Inflammation	21p.
Duvall, Philip P. Barton	Diagnosis	26p.
Dodson, Robert A.	Attentions During Labor	26p.
Dulaney, William W. Hamilton	Hernia	27p.
Brothers, R. F. Sumpter	Diagnosis	19p.
Doyle, Frederick F. C.	Dysentery	21p.
Clendinen, Alex. Jr.	Lachrymal Apparatus	25p.
Byrne, Charles C.	Epilepsy	32p.

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SCHOOL OF MEDICINE

Fort a new impulse. For [illegible] cen-
ties has the advanced [illegible]
[illegible] strides, making daily discoveries,
adorning [illegible] dignity [illegible] a science,
based upon fixed principles, established
by observation experience, and
scientific investigation.
But with all the great truth and
discoveries, brought to light, by the
physiological and chemical researches
of man, none exceeds in importance
that of Chloroform. As discovery is
a word, constitutes of all others,
one of the greatest, of the many
boons, science has conferred upon
poor suffering humanity.
Since the introduction of moral [illegible]

the world, [illegible] the [illegible] of [illegible] animated [illegible], [illegible] [illegible] [illegible] the uninterrupted enjoyment of health. And as it is the [illegible] of our [illegible] [illegible], to avoid that which we have conceived would be hurtful to our senses, and to seek for means of [illegible] living [illegible], and suffering, we may safely conclude, that remedial agents were resorted to, in the earliest age of the human race. Chloroform, a substance now so universally in use, as a remedial agent, and which forms the subject of my dissertation, is a nervous sedative, and one of the most powerful of the [illegible].

[illegible] of America, [illegible]
the honour of having first discov-
ered the agent now under consider-
ation. The first recorded instance
of its use, was by Doctor Fox of
New Haven, who, from its known
physiological effects, used it in
spasmodic cough and other
nervous affections. Its chemical
quality has been a subject of much
cavil and dispute, by chemist,
until Dumas, by his analysis
determined it to consist of three
elements, Two of Carbon, one
of Hydrogen, and three of Chlo-
rine. Its chemical symbol being
therefore $C^2 H Chl^3$.

The physiological effects of this agent as [illegible]
[illegible]
[illegible]
mental confusion, [illegible]
it exercises on the [illegible]
where we presume the mental [illegible] of man
to reside. Following the effects above enu-
merated, we have perfect relaxation of the
muscular system, consciousness [illegible]
[illegible] annihilated, [illegible] regular and
[illegible] constituting the second stage of the
operation. At this time the pulse is also
regular in its action. The [illegible] condi-
tion [illegible] of the use of [illegible]
and the one of all means to be guarded
against, is the irregularity of the pulse,
and interrupted respiration.

these phenomena are mainly dependent upon the administration of [illegible] surgical purposes, or sensible experimentations. From the foregoing considerations, we are forced to the conclusion that the agent is one justly ranked among that class of medical agents, whose influence is the diminution of the sensibility, or the sensorial distraction. With the introduction of such an agent, possessing powers so active and energetic; nothing with such an offering upon the altar of science, arose the most fierce and determined opposition. The waves of judicial opinion have been [illegible] [illegible] medical application. In no language a

should [illegible] exist, where the admin-
istration of Chloroform should be deemed
advisable or necessary, it then becomes
the Physician, after grave and calm
deliberation, to modify this condition
by depletion. The heart when impaired
or enfeebled in its function, by the pre-
sence of any organic affection, such as
atrophy, fibrous opeous or cartilaginous de-
generation, affecting the muscular structure,
or valvular arrangement of that organ,
then again it becomes a question for
serious reflection, with the Physician, or
surgeon, whether the use of such an
agent, could be made with impunity
or not. The conclusion must be inevi-
table therefore, these pathological condi-

tion being recognized, from the brief observations I have taken of its effect physiological and therapeutical, that its use is not not only not dangerous, when timely employed, with the ordinary guides of judgement and common sense at our command, but on the contrary most beneficial and advantageous. With equal propriety, might its opponents condemn the use of Calomel, because occasionally it is out of the powers of our art, to detect the [illegible]

[illegible]

to its administration. This consists simply in withholding any food for some hours previous to the operation. While in the Bal" Infirmary, I have seen this necessity most beautifully exemplified. In several instances where this restriction was not enforced, the patient invariably vomited upon the inhalation, and thus manifesting its qualities as a local irritant. The most simple mode of giving Chloroform is by floding an ordinary hand kerchief in a conical shape, and saturating with the liquid, and after relieving all constriction about the neck, offered by a cravat, we [illegible] the administration of the agent, being careful [illegible] have its sufficiently impregnated with fresh

[illegible] affection, [illegible] by the excessive use of [illegible], [illegible] will [illegible] answer our purpose, than Chloroform. The remarkable phenomena of this disease, being, from the most [illegible] forms of nervous tremors, together with spectral illusions and accelerated pulse, to the most alarming state of vital depression, and muscular agitation, dependent upon this disordered state of the nervous system. This condition when attended with marked and decided vascular disturbance, will often yield to the proper employment of depletion in conjunction with purgatives, and other agents, from time to time suggested by the masters of our art. But often, after the subsidence of the inflammatory action all the striking phenomena of nervous

seems to exist in many per=
sons, though what that pre=
disposition is, we are as yet
unable to discover.
The period of life has some
influence over it; it is much
more common in youth
and middle age than in
old age. Sex has been con=
sidered by some, to act in
some way as a predisposing
cause, but from the con=
=flicting results of statistical
observation, it is impossible
to arrive at a just con=
=clusion on this point.
It is certainly hereditary,
but Epilepsy like all diseases
which have a hereditary

tendency, may omit one or even two generations and so the fact of its being predisposed inheritance may be overlooked.

Any thing that greatly disorders the functions of the brain may act as an exciting cause of an attack of Epilepsy.

Irritation or action of some distant organ, is often the exciting cause, by the irritation being reflected to the brain. Inflammation of the stomach, or intestines, worms in the alimentary canal, indigestion, act as the exciting cause.

Disease of the heart may

Kidneys, uterus &c, also produce Epileptic attacks. Masturbation, sudden anger, joy, and grief also great exertions. Effusion of blood on the brain, violence inflicted on the head especially if portions of bone are depressed. Malformation of the skull, suppression of habitual discharges, circulation of venous blood, all may be classed among the exciting causes of Epilepsy. The circulation of venous blood in children from the non-closure of the foramen ovale is a fruitful source of Epileptic convulsions. Epilepsy consists of convulsive attacks, with loss of all the

cases, returning at irregular in-
-tervals, and of various degrees
of violence, sometimes so
slight as to be scarcely per-
ceptible to others & paroxysms
of the most violent and
dreadful convulsions.
Epilepsy is occasioned by
an abnormal irritability of
the brain, which may be
considered central or excentric
according as this irritability
originates in the brain, or in
some distant organ and is
thence reflected to the brain,
causing the characteristic
symptoms of an Epileptic
attack.

Post Mortem examinations

often, throw no light on the cause of the disease; Frequent=ly no lesion is found, which can account satisfactorily for the attack; no lesion either in the brain or any other organ, which could have given rise to the disease. Lesions are however sometimes found. Structural lesions of the brain are not often found; they are much more common in paralysis than in Epilepsy. The terminations of Epilepsy may be either dimentia, para=lysis or death.

The brain from being overexcited and congested undergoes, slow inflammation, and softening;

from which softening, dementia and paralysis result. Idiocy is the most common result.

The prognosis is doubtful; and depends on ~~xx~~ many different conditions, which have to be taken into consideration and which of course render it more or less uncertain, according as we can appreciate those different conditions or not. When the disease is hereditary or begins at a very early period, or be of long standing when it falls under the observations of the physician, the prognosis is decidedly unfavorable.

When Epilepsy has existed for a long time, & though the cause which originally produced the disease, may be removed, diseased action having been established in the brain, the removal of the original cause will not relieve the disease.
When the cause is constitutional the prognosis is more favorable than when cerebral; for as a general rule, the cause in the constitutional form is more easily reached, than in cerebral. The more violent and frequent the paroxysms the more unfavorable is the prognosis. Dr. Hood in

his excellent work on the practice of Medicine says, that "after six months, the chances are much diminished and cases of a year's standing, are often intractable, especially, if during that time, they have resisted judicious means" If we have reason to suspect the existence of tubercles in the brain, or any organic change in its substance the prognosis is unfavorable, and the patient's prospect of recovery is dark and gloomy. When paralysis follows an attack, denoting that some change has taken place it is a very unfavorable symptom.

An attack of Epilepsy, may or may not be preceded by premonitory symptoms. Some patients are depressed and anxious, others are unusually cheerful and gay, while some will experience no change of feeling. Sometimes there is confusion of thought, loss of memory, change of appetite, unreal sounds or odors, hallucinations, and various other symptoms. There is a peculiar and remarkable hallucination, experienced by some, which is termed "aura epileptica" and is somewhat similar to the "aura hysterica" of hysterical

patients. They describe it as a feeling, as if of a stream of water or air; of the escaping of ants, rising from some point of the body and going more or less rapidly to the head when the patient immediately falls unconscious. In some instances the patient feels an intense pain in the head with total or partial blindness. The duration of these symptoms is various sometimes they last for a considerable length of time, at other times they pass so rapidly that the patient has not time to assume the recumbent posture, or to seek

a place, where he will be in no danger of injuring himself by falling, which, after several attacks, he will in many instances instinctively endeavour to do.

When the attack comes on suddenly, the patient falls without sense or voluntary motion. The face may be pale or livid, though generally it assumes the latter condition. The head is twisted to one side, and fixed on the chest, the muscles of the throat are tightly distended, the tongue is thrust out, and may thus be severely bitten to a considerable extent.

the eyes are rolled up, so as to leave only the whites visible, a fixed staring and glassy. The pupils are contracted or dilated, but insensible to light in either condition.

The muscles of the body are rigidly contracted, while the muscles of the limbs are alternately contracted and relaxed, and are thus thrown about in the most violent manner. The paroxysm is sometimes attended with priapism, and involuntary discharges from the bladder and rectum. The respiration is hurried and difficult from the fixed of the muscles of the chest

being contracted, so as to prevent free expansion of the lungs and consequently free passage of air, or the Larynx may be closed, giving rise to Symptoms somewhat similar to those of a modified asthma. The pulse is irregular and frequent, and may be either fine or full.
The violence of the Symptoms gradually subside. A profuse perspiration breaks out, and after a longer or shorter time he wakes with a slight, astonished look; this also gradually passes off and he returns in most instances to full consciousness, but without any

recollection of what has occured and ignorant of the fact that he has had an attack of Epilepsy, unless taught by former experience.

The duration of an Epileptic attack is various; the average time however is between 5 and 20 minutes.

Some patients suffer no unusual symptoms on waking, others may have headache, giddiness and sometimes nausea.

The attack may be followed by temporary insanity, varying in degree from mere confusion of thought to raving delirium. The latter condition is sometimes denominated "Manie Epileptica"

All cases of Epilepsy are by no means so well marked, or with such violent paroxysms as those just described. The attacks are occasionally so slight, that occurring at night, the patient would see his friends may not be aware of his being subject to attacks of the disease. Sometimes the only symptoms are a slight laceration of the tongue, or there may be a small quantity of blood on the pillow, or the patient may feel a little prostrated the next day. These cases if unperceived, and unattended increase till the patient's attention

is called
To them; some attacks are at=
=tended only with confusion of
the mind, with vertigo and in=
ability to stand; others again
fall suddenly but immediately
recover, and if conversing,
continue the conversation
when it was interrupted, without
being aware of having suffer=
=ed an attack of the disease.
This mild form constitutes
the "petit-mal" of the French
authors.
As a general thing the re=
=turn of an attack is very irreg=
=ular, but sometimes the attacks
return at regular periods.
This is dependent in females
generally with some derangement

of the menstrual function; in males it may be connected in some way with the period=ical paroxysms of intermittent fever.

The desease with which Epilep=sy is most apt to be con=founded is hysteria; this is not difficult to distinguish however. In attacks of hysteria, there is no foaming at the mouth, no grinding of the teeth, no laceration of the tongue, and no lividity of countenance as in Epilepsy. In hysteria the patient general=ly laughs or sings, in Epilepsy there is no sound, except, per=haps a sharp shrill cry when

the attack comes on.
Epilepsy is often feigned, but is not difficult of detection. Here again there is no foaming at the mouth, no laceration of the tongue. The impostor is careful to fall where he will sustain no injury, the real epileptic on the contrary frequently injures himself by falling. He can easily be made to give evidence of pain, while the real epileptic is totally devoid of sensation. The suggestion of any painful remedies, in case of the impostor, such as boiling water, the actual cautery &c. will soon cure him. There is no lividity of the countenance, so common in Epilepsy

The treatment of Epilepsy is as various as the causes that give rise to it; and as it may be produced by so many different causes, it will be impossible to give any fixed or definite rule for its treatment.

When it depends on inflammation in any distant organ that inflammation is to be subdued. When on worms in the intestinal canal, anthelmintics are to be administered. When on indigestible matter in the stomach, the indication is for emesis. When on the suppression of discharges the discharges is to be restored.

when it depends on syphilitic affections of the bones of the cranium, we naturally look to Mercury and the Iodide of Potassium for relief and often with success. When there is great irritability of the nervous system, Opiates are indicated. Of these the most efficient is Muriate of Morphia. The chief objection to this, is its rapid discoloration of the skin, but if after its use for six weeks it is discontinued for three weeks, there is not much danger of this. During the paroxysm, the only thing that can be done is to prevent the patient's injuring himself. To remove anything that could interfere with the function of

respirations. If there is turgescence of the face, and the pulse be strong, full and frequent, it may be well to take blood from the arm. It would be well, if possible to place a piece of cork or some soft substance between the teeth, to prevent them from being broken, as is sometimes the case, and to prevent the tongue from being lacerated.

I have passed quickly over the treatment of Epilepsy, merely giving the outlines of it, as I said before, no definite rule can be laid down, but the indications in each case

must be treated as it presents
itself to the physician's notice.

An

Inaugural dissertation

on

Pneumonia

Submitted to the examination

of the

Provost, Regents

and

Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by Lewis Adler

of Maryland.

Whether we consider the diseases of childhood, adult life or old age, there is scarcely one, that assumes (more) importance to the physician, than Pneumonia. It is especially important of diagnosis, for an insidious attack of pneumonia may steal in upon another disease, and carry off the patient, before the medical attendant has been made aware of its presence. Pneumonia is gravest in infancy and old age, or in broken down constitutions. There the system can withstand active and energetic treatment, but little is to be apprehended the prognosis is generally favourable, but under other circumstances, there is scarcely a disease, that so rapidly and surely progresses to a fatal termination. The rate of mortality from pneumonia, is greatest in childhood, and old age, and at the latter period of life is peculiarly dangerous.

The name pneumonia is known to all, as an inflammation of the parenchyma, or the substance of the lungs.

Anatomical characters. Acute pneumonia has three stages. The first stage is that of engorgement. The substance of the lung

is congested with blood or bloody serum. It is of a dark red colour, externally, crepitates under pressure, though less than in health. We feel that the cells contain more liquid than air. It is heavier than natural, and the impression of the finger is retained in some degree. When the engorged portion is cut, we find it red, and we see exuding from it a large quantity of a reddish and frothy serum. The mucous membrane of the small bronchial ramifications in this stage of engorgement is of a deep red colour. If the inflammation continues, the lung undergoes a further change, and presents the following character. It is still red externally and within, but crepitation is no longer felt under pressure, contains no air, and sinks readily in water. When cut into, the lung bears a striking resemblance to the cut surface of the liver. Hence, authors, have applied to this altered condition of the lung, the term hepatization. When a fresh incision is made, there still exudes from it some red fluid, but it is much less in quantity than in the former degree. The hepatized lung is more solid than before, and more easily crushed and

broken. If you cut a portion of hepatized lung, and examine the surface, the pulmonary tissue will appear to be composed of numerous small red granules. These are said to be the air vesicles, filled up, thickened, and made red by the inflammation. The lung does not collapse upon exposure to the atmosphere, as in a healthy state. I have been writing of pneumonia as if it were apt to attack the whole, or the larger portion of the lung on one side, but the changes, I have been describing are sometimes limited to certain of the pulmonary lobules, and this state is called lobular pneumonia. In a degree still further advanced, the pulmonary tissue, being solid and impervious to air, as in the second stage, undergoes a change of color, it presents a reddish yellow, straw or red color, or it is of a grayish hue sometimes, mixed with the black pulmonary matter. The granulations instead of being red, are whitish or gray and the substance of the lung is still more rotten, and more easily broken than before. It is full of purulent matter, which is sometimes so abundant, that it flows out freely, when incisions are made in it

the lung. The third stage of the process of inflammation in the lung, has been called gray hepatization, or purulent infiltration. Gangrene is sometimes, but very rare, the result of acute inflammation of the lung. When inflammation has progressed rapidly, the vitality of the lung is sometimes destroyed before it has had time to pass through the second and third stages, this rapid destruction is gangrene, the appearance of the gangrenous lung, is of a dark brown, and it has lost its elasticity, and its structure breaks down easily under pressure, the lung in this state has a disgusting odour, peculiar to gangrene. The inflammation may affect both organs at once, or it may affect one of them alone. The right lung is said to be more frequently affected. When the full. Inflammation of the bronchi always accompanies inflammation of the parenchyma. The mucous membrane presents a red colour both in the large, and small branches of the air passages, and when a lung is inflamed, it has been noticed, that the colour of the mucous membrane, existed in those bronchial tubes alone, which were

distributed to that lobe.

Symptoms. Pneumonia generally commences with a chill, often very decided, followed by febrile reaction, dyspnoea, cough and severe pain in the side, or posterior part of the chest. Sometimes the characteristic symptoms of the disease are preceded for some days, by general uneasiness, loss of appetite, lassitude, and more or less fever. Not unfrequently the disease commences with catarrhal symptoms, which remain for several days, before signs of pneumonia become manifest. When fully developed, the disease is characterized in most cases, by hurried respiration, fever more or less severe, pain in some portion of the thorax, and scanty viscid expectoration, often mixed with blood. The pain may either precede, accompany, or follow the commencement of the fever. At the beginning it is often very acute, and severe, and is much increased by a full breath, or coughing. The breathing is always hurried. Cough is generally present in a greater or less degree, during the course of the disease. At first it is usually dry but very

soon after, a viscid semi transparent matter is thrown up, which either is in the beginning or very soon becomes stained more or less with blood, so as to have a reddish or rusty colour, sometimes inclining to green or yellow according to the amount of blood present. These properties of the sputa become more striking as the disease advances. The tenacity is so great that the matter adheres to the vessel containing it when this is turned bottom upward. This viscid and rusty coloured expectoration is probably the most characteristic general signs of pneumonia, and sometimes indi-indicates its presence, when the physical signs fail. In relation to the posture, the patient most frequently lies on his back, with his head and shoulders somewhat elevated. Tense generally accompanies severe cases of pneumonia. It varies extremely in degree, being occasionally so mild, as almost to escape notice, and sometimes intense in the highest degree. It is often attended with flushed cheeks and pain in the head, especially about the brows or forehead, sometimes the headache is the only [illegible]

tion, of which the patient complains of for the first days. Delirium, occurs now and then and is generally an unfavourable sign. The fever has often a remittent character, the exacerbations occurring daily, generally in the evening, and accompanied with increase of pain, difficulty of breathing, cough, and bloody expectoration. The pulse is generally full, strong and only slightly increased in frequency, but it is occasionally very frequent, even from the beginning of the disease, and in the latter case is apt to be smaller and less vigorous. The skin is usually hot and dry, though sometimes moist. The urine is usually scanty and high coloured. Thirst and loss of appetite are almost universal. The tongue is generally moist and coated, with a white or yellowish white fur, but it is occasionally clammy or dry and red. Vomiting, and diarrhea, are sometimes present, the latter more especially in the advanced stage.

Physical signs. In the first stage or that of engorgement, on percussion there is usually a slight diminution of the healthy

resonance, but not so marked as to serve for a ready diagnosis. If the ear be applied to the chest, we observe that the healthy vesicular murmur, has given place to the inspiratory rale, though the former may sometimes be heard, mingling itself with the latter, before it is quite lost. As the disease progresses into the second stage, the expiratory ronchi, and the respiratory murmur having been previously abolished, either no sound is audible or only that of bronchial respiration. There is also a stronger vocal resonance, the vibration produced in speaking, being conveyed more readily through the condensed structure. Bronchophony is likewise another characteristic of the second stage. On percussion, instead of the slight diminution of clearness observed in the first stage of engorgement, we have now decided dullness. Bronchial respiration, or bronchophony are wanting in some instances. Should the disease be arrested in the stage of engorgement, the inspiratory rale, gradually subsides, and the expiratory murmur

health, is restored. After the establishment of hepatization, should resolution of the disease take place, the bronchial respiration and bronchophony cease by degrees, and the crepitation returns in general, however, somewhat modified, and assuming the character of the subcrepitant rale. The existence of the third stage, can not be accurately ascertained by auscultation. When the second stage has not yielded, and the patient becomes more futile, and there is cessation of pain, our worst apprehensions ought to be aroused. If we add to this that the sputa become changed, and a moisted ronchus exists in the lungs, and there is any evidence of pus in the expectoration, we may be certain that the disease has passed into the third stage, or that of purulent infiltration. With this condition, are associated great prostration of the vital powers, an inability to breathe while lying down, and the patient is obliged to have his shoulders elevated, that the respiratory process may be less difficult. To revert to the ordinary symptoms, should the

disease yield to treatment in the stage of engorgement, as it occasionally begins to do on the third or fourth day, the pain disappears, the expectoration becomes more copious, and more of the character of ordinary mucus, the febrile symptoms diminish, the tongue commences to clean, and convalescence may be established in less than a week, though the disease may go on for two or three weeks, before all the symptoms disappear. In the majority of cases, the first stage advances to that of consolidation. The change is not marked, by any very obvious general symptoms. There may be some increase of pain, dyspnoea, frequency of respiration, fever and debility. If the disease now progresses it passes into the stage of purulent infiltration. There are no certain signs by which the accession of the third stage can be distinctly marked. Excepting those which I have before related. The symptoms of pneumonia are somewhat modified when occurring in persons greatly debilitated, by oldage, or other causes. Under these circumstances

it not unfrequently happens, that there is no acute pain, and little or no expectoration, and that any matter that may be coughed up wants the appearance of that characteristic of ordinary pneumonia. The only local symptoms are, a slight cough, difficulty of breathing, increased respiration, with little fever, and even these are sometimes wanting. Extreme debility, great prostration, a pale or livid complexion, a small and irregular pulse, and a certain degree of mental disturbance may generally be observed. The respiratory note is said to be obscured, by mucous sounds, and bronchial respiration is from the same has observable, but the dullness on percussion, taken in connection with the other phenomena, will be sufficiently distinct. This form of the disease is very latal. Whether from the same impression, an effect is produced upon all the organs, inflammatory action may be started in a remote part, in consequence of the state of the blood; or sympathetic inflammation may be possible, we know that during an attack of pneumonia

complications of the most serious character, may result. Sub acute inflammation, and congestion of the liver, is not an unusual form, this variety has the name of bilious pneumonia. It is perhaps more common to malarious districts, but may be met with anywhere. Other derangement of the gastro-intestinal canal may add to the severity of the disease. The most serious complication of pneumonia is a typhoid condition, supervening upon the disease. In this state if treatment is not managed in the most careful manner the patient will yield to the combined forces of the two diseases. Typhoid pneumonia is of course most common, to broken down constitutions, it is apt to occur also, in chronic cases of pneumonia, that refuse to yield to treatment. In these cases the vital powers gradually fail, and gradual exhaustion terminates the cases. In the treatment of pneumonia, the condition of the other organs ought always be attended to an any complication should be immediately met. The

state of the [illegible] system [illegible] to [illegible]
and watchfulness with us, for there is a limit to our [illegible]
treatment, that if we step beyond, will soon be fatal to the patient.
If the disease has not yielded during this method [illegible] entirely dif-
ferent one must be adopted and our attention must be directed to rou-
sing the vital energies by stimulation, & it is this stage that may be
usually distinguished as typhoid pneumonia.

The causes which operate in the production of pneumonia are
vicissitudes of the weather, sudden exposure to cold when the body
is warm and perspiring, the [illegible] breathing the air when the [illegible]
[illegible], or labouring under a chronic attack of the lungs.

Certain morbid poisons acting directly on the lungs are said to
be frequent causes of pneumonia, excessive use of the voice, violent
exertions of any kind, which accumulate blood in the lungs, and
the sudden disappearance of cutaneous eruptions are classed among
the occasional causes. Of the predisposing causes, [illegible] may be
ranked among the most frequent. Hence, the disease is much

most in cold countries, and in the colder seasons. It is said to be as common in cold and dry, as in moist climates. The disease is more frequent in men, than women, but the reason of this is probably, that the former are more exposed to the vicissitudes of the weather, and to other exciting causes.

The general indications of treatment are similar to those of all inflammatory diseases. They are those that lessen the quantity of blood in the inflamed organ, that diminish the force of the heart's action, that lessen the amount of fibrin in the blood, and produce diaphoresis. Of the first, bloodletting, both general and local, are of the first importance. Of the second, Tart. Emetic, and of the third Nitre and c; In persons with vigorous constitutions bleeding is the most efficient remedy. In deciding upon the quantity to be taken, we must be guided by the stage of the disease, the state of the pulse, and the constitution of the patient. In a healthy, patient in the early stage of the disease, with a strong pulse and before the action has been fully established, from

fifteen to twenty ounces may be taken at the first operation. There is some reason to hope in this stage that we may arrest the progress of the disease, by decided measures. Should the symptoms have in no degree abated we may bleed again, and the operation may be repeated if necessary, but the pulse and general condition must be the guides. Cases occasionally occur, in which the loss of blood is necessary, though the pulse may not seem to indicate it. The lungs are overwhelmed with the sudden and extensive congestion, and the function of respiration consequently so much impeded as to occasion a partial asphyxia, in which the surface becomes pallid or purplish, and the pulse very small frequent, and feeble, suggesting the idea of great prostration of the vital forces. The fault is not in debility, however in these cases, but in excessive action in a vital organ, and the remedy is not stimulation, but abstraction of blood. The surface of the chest ought to be excited by irritants, but the important object is to unload the lungs. It generally happens

that the pulse rises under the lancet, and this affords an indication, that the remedy has been justly employed. Should the suspected prostration come on suddenly in individuals previously in tolerable good health, and the respiratory movements show evidence of great oppression of the lungs, it is better to treat the case as one of active pulmonary congestion, and try general bloodletting. Should the pulse become still weaker, the lancet must be laid aside, but should it be the contrary, the operation ought to be continued, until the symptoms are relieved or the patient can bear no further loss. After the first bleeding recourse should be had to an active cathartic, to evacuate the bowels thoroughly, such as, the compound cathartic pill, calomel and jalap, infusion of senna with Epsom salts, and c; but subsequently throughout the case, it will be sufficient, merely to keep them open once or twice a day, which may be accomplished, if required by small doses of a saline cathartic, castor oil, or magnesia, or what may occasionally

be preferable, by enemata. But the remedies used, to fulfil other indications, very often happens, have the effect of sufficiently loosening the bowels, so that measures are not wanted, for that purpose especially. Recourse should be had to small doses of tartar emetic, repeated at short intervals after the bowels had been evacuated from the twelfth to the quarter of a grain for example, every two hours during the day. This may be accompanied with the neutral mixture, or nitre, if born well by the stomach should the skin be hot and dry. The antimonial, should be laid aside in cases attended with vomiting, and the effervescing draught should be substituted. If the force of the circulation has been sufficiently subdued by the lancet after two or three days a mixture may be given at night, consisting of ipecacuanha and opium each one grain, and two or three grains of calomel; the treatment above pointed out, being continued through the day. Sometimes the dose of the anodyne

may be increased, if the system is not very susceptible to its influence. The advantages of this combination are that it procures rest for the patient, obviates the injurious effects of the cough, directs action to the skin, and lays the foundation for a mercurial impression, if this should afterwards be deemed advisable. Blood should be taken from the chest by means of cupping glasses, as besides it is said that much good is done by this local emptying of the blood vessels. It is especially indicated if the brain should continue after the use of the lancet has been carried as far as may appear admissable, and the physical signs indicate the unchecked progress of inflammation. Large emollient cataplasms are also occasionally beneficial, but their use requires great caution. They frequently the symptoms of inflammation will cease gradually, under this treatment, and the patient recovers, [illegible] in a few days. But should the disease [illegible]

to resort to the mercurial impression. The combination of calomel, opium, and ipecacuanha may now be given through the day in smaller doses, repeated at short intervals. The relative quantity of the ingredients must vary according to circumstances. Generally speaking, half a grain or a grain of calomel, one quarter of a grain of opium, and the same quantity of ipecacuanha may be given at intervals of one two or three hours, so that not more than from two to four grains opium should be administered in twenty four hours. Three or four grains of calomel with a half a grain of opium, may be given if the symptoms are threatening, and a speedy mercurial impression is wanted. The mercurial plan should be carried far enough, so as to affect the gums slightly, when the system will generally begin to improve. A profuse ptyalism, is never required, and as soon as the gums give evidence, that the system is affected with mercury it should be abandoned for a time, or continued in smaller quantities, so as

merely to sustain the effect produced, and until all the symptoms of pectoral inflammation shall have ceased. A blister may with great propriety be applied to the chest at the same time that this plan is in operation. It should be large, not less as a general rule, than six inches by eight. Expectorant medicines are often beneficial in the declining stage of the disease. The syrups of squills and seneka, may be combined with a small quantity of tartar emetic and given in such doses, as the stomach will bear, without being nauseated. If the pulse remain frequent, as it sometimes happens the tincture of digitalis may be added to the other ingredients. Not unfrequently we will have to suspend the antimonial, in consequence of its depressing properties. In the advanced stage should the strength give way it will often be found very useful to employ carbonate of ammonia. If hectic fever should set in recourse should be had to sulphate of quinia. The tonic

employment of moderate use of stimulants, with a nutritious diet, under such circumstances, has often saved life. Gangrenous symptoms may be met with chloride of lime, opium, and the mineral acids especially the nitro-muriatic. It is very important in the cases of intemperate individuals not to take away their accustomed stimulus entirely or at once. The quantity should be diminished. If pneumonia is not seen until it has reached an advanced stage, the use of bloodletting must be employed more cautiously. Still, moderate quantities of blood may be taken with advantage both generally and locally. When the disease occurs in persons enfeebled by previous bad health, or by extreme [illegible], when it is complicated with affections of a low grade of vital force, as malignant erysipelas, scarlet fever, and c; bloodletting is not advisable, as the loss of blood is badly born by the patient. Other remedies, which have been employed with good results in pneumonia, in the earlier stages are, muriate of ammonia, hydrocy-

anic acid, the alkalies and their carbonates, and nitrate of potassium in the advanced stages of the disease, when the lung remains consolidated, and fever has disappeared. Should the disease have arisen from repelled eruptions, efforts should be made to restore them to the surface, by the warm bath, hot pediluvia, and blisters or rubefacients. The patient should lie with his shoulders somewhat raised and in protracted or debilitated cases especially should have his position changed occasionally, in order to prevent the blood settling in any one portion of the lungs. Care should be taken to expose the surface as little as possible, in the physical exploration of the chest. The air of the apartment should be of a uniform temperature, but purified by sufficient ventilation. The diet in the acute stage, should be exceedingly simple, such as gruel, arrow root, gum and toast water. At a more advanced period when the fever has been somewhat allayed, a more free allowance of food

may be permitted first farinaceous food, then broths, and finally solid animal food. There are cases, of even simple pneumonia which require the use of animal food moderately, during the whole progress of the disease, not solid food, but, light broths. There are other cases, still more numerous, especially at the advanced period of the disease, which may require wine, and the most active supporting treatment.

The above brief account of the symptoms, progress and treatment of pneumonia, will justify me in repeating at the close the statement I began with, that there is scarcely a disease, which called up the energy, and the skill of a physician, as much as pneumonia. The careful watching of its progress, the dangers of complications, and the judicious management of treatment to meet its varying phases, should call into exercise all ones knowledge of physiology, pathology, and therapeutics. If this brief essay is a clear expedition of these points, and if its principles of practice are correct, I have reason to hope

that I have not interested myself in the disease in vain.

An

Inaugural Dissertation

On

Chloroform and its application

to Surgery and Midwifery

Submitted to the examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Theodore Cook

of Maryland

1859.

Gentleman

Being called upon for a dissertation on some subject connected with medical Science, I have chosen Chloroform on account of its recent discovery, and also that I may thoroughly understand its virtues, and dangers, as a remedial agent.

Chloroform was discovered about the same time by Mr Samuel Guthrie of Sacketts Harbour, New York by Soubeiran in France and Liebig in Germany in 1831. Its discovery was accidental. Mr Guthrie supposed it to be, the Chloric Ether of Dr T. Thompson it is important to distinguish this from the Chloric Ether of our Pharmacopoeia this name being improperly applied to the Alcoholic Solution of Chloroform

The precise chemical nature of this substance was not ascertained till three years afterwards, when it was found by Dumas to be a Compound of three equivalents of Chlorine, One of a Substance called Formyl or Quarburet of Hydrogen. Chemically Speaking it was found, to be a Terchloride of Formyle.

The mode of preparation according to our Pharmacopeia is the following, take Chloride of Lime, Water, & Alcohol and then subject to distillation. Two liquids are condensed in the receiver the heaviest of which is Chloroform, this is then seperated, wash with water, till all alcohol is removed, A solution of Carbonate of Soda is then added, to remove the Chlorine, the Chloride of Calcium, is

agitated with it, to remove the water from it and again submitted to distillation. The product is clear Chloroform. It is generated by reaction between the alcohol, and Chlorine of the chloride of Lime. Chloroform is a colourless liquid of a fragrant ethereal odour, and a sweet slightly pungent taste; its specific gravity is 1.49. When put into water it sinks rapidly, forming globules of a peculiar appearance. An alcoholic solution of it not containing more than ten per cent of Chloroform mixes with water, without being decomposed. Chloroform itself is a powerful solvent. Dissolving substances, that are not perfectly soluble in alcohol as wax, gutta Sulphur &c, Chloroform is very volatile, therefore

Regaining to be kept in close stopped bottles, in order to preserve it. It is not inflammable.

We will first consider its local effects; when applied to skin or mucous membrane, it produces an irritant and burning sensation, this soon subsides and is followed by more or less diminution of the sensibility of the part with a suppressing relief of pain if any be present. The mucous membrane being less protected than the skin its irritant impression is therefore more severe; This irritant action when taken by the stomach is often sufficient to cause nausea & vomiting, this is especially likely to happen, when our perfectly suspended in the vehicle in which it [illegible]

only momentary, and is seen followed
by the effects of the system at large.
These may be divided in three stages
which are more or less well marked
according to circumstances, first a
preliminary stage where there is
slight cerebral confusion, second an
anesthetic condition where there is
insensibility to painful impressions
without loss of either consciousness
or motion; third a stage of complete
muscular relaxation and unconscious-
ness. In the first the brain is confused
feeling of an agreeable character [illegible]
minded; this is seen followed the sec-
ond which however is not often well marked
In this there is insensibility generally
not unconsciousness. I have seen a

[illegible] operated on, when under the influence of Chloroform that [illegible] me, every step of the operation, although he was not sensible of any pain, [illegible] feeling of a ludicrous character [illegible]. This may be obtained in fifteen seconds; and rarely later than two minutes; If the medicine be continued this is followed by a comatose condition marked by stertorous breathing, muscular relaxation, and complete loss of consciousness: the eyelids drop, the eyeballs roll upward, the limbs fall to the side, the breathing is slow, stertorous and sometimes [illegible] with froth at the mouth: In rare cases we have slight spasms of the muscles of the face and extremities sometimes tonic spasms

[illegible] effects as headache, loss of Appetite, Lassitude &c found after the Administration of other and other [illegible] Stimulants.

When the effects are carried further than those we have just described they may be called Poisonous. When this is the Case, the respiration becomes [illegible] slower, untill it ceases, the pulse becomes more, and more feeble, untill it stops, and Death is present. In these Cases the fatal termination is brought about by its action upon the medulla Oblongata and thirdly producing Asphyxia. The heart being secondarily effected. But there is another way in which Death may be produced, that is where the heart stops beating before the respiration has

posture, its contractions are not sufficient to send the necessary amount of blood to head, this failing to be done, syncope is suddenly produced: this teaches a practical lesson: We should always keep our patient as quiet, as possible when under the influence of Chloroform. When we find the patient becoming as physicated we should dash [illegible] water upon his face and head, supply him with fresh air some volatile pungent stimulant should be applied to the nostrils to help in [illegible] the [illegible] [illegible] the [illegible] [illegible] [illegible] maintained by artificial [illegible] [illegible] the patient is out of danger, or dead.

If a tendency to syncope is observed it should be counteracted, by recumbent pos-

symptoms which it occasions, they b[illegible] [illegible] [illegible]. [illegible] suffocation [illegible] [illegible] to act upon the blood. [illegible] [illegible] it appears [illegible] the effects of it the [illegible]; [illegible] its darkens the blood, by operating upon the [illegible] [illegible] [illegible] [illegible] function, which is imperfectly performed [illegible] these cases. and the blood becomes dark from not being deprived of the [illegible] amount of Carbonic Acid. [illegible] important fact, and explains one point in [illegible] [illegible], that is when [illegible] [illegible] [illegible] the [illegible] the [illegible] [illegible] [illegible] passing through the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] what function is the [illegible] [illegible] [illegible] [illegible] have its effect upon: The question is

[illegible]
Tetanus, but like all other remedies recommended and tried in that [illegible] has failed. The last is when employed to produce muscular relaxation. This form is an important addition to the Surgeon's Armory, for the reduction of dislocation and Hernia. In these cases the patient must be completely put under its influence or it does not [illegible] Hernia where the neck is surrounded by muscular fibre, as inguinal [illegible] it is an indispensable agent [illegible] structure is formed by a ligament [illegible] much avail.

Application to Medicine

The world is indebted to Professor [illegible]

[illegible] as [illegible]
[illegible] forceps, [illegible]
[illegible]
[illegible]
Dr Robert Lee, has collected five cases
in which the contractions were [illegible]
were not resumed, on stopping the Chlo-
roform, and [illegible] by the
forceps. Dr Simpson, Murphy & Others
found according to their experience, that the
contractions commence as soon as the Chlo-
roform was suspended, this is probably al-
ways the case when the uterus [illegible]
worn out by the previous contractions, and it
is likely this was the condition in the [illegible]
cases above related. If not [illegible]
[illegible] the Chloroform was improperly [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

Second Case reported by Dr. Ramsbotham where death took place an hour and half after Chloroform was suspended, the patient was not unconscious during the whole time of its administration, death was preceded by dyspnoea and convulsions. Third Case reported by [illegible] where there was no unconsciousness. None of these Cases can be taken to disprove the use for the first only [illegible] that it may produce death if improperly used. The [illegible] two probably died from other causes, there being none of the poisonous symptoms of Chloroform present.

The great difference in [illegible]

[illegible] may be given. The best apparatus for this purpose is a handkerchief, a sponge with a hole in it to receive the nose; there are certain cautions which are necessary to observe in its administration. First a competent person should always keep his hand upon the pulse, and watch the respiration; second restorative means should always be at hand; third it should not be given to [illegible] to syncope, or where there is debility of the heart; fourth it should always be sufficiently diluted with atmospheric air; fifth profound [illegible] should always be avoided.

Theodore Cooke

Maryland

1857

An Inaugural Dissertation

On Purulent Opthalmia of Infants

submitted to the examination of the

PROVOST, REGENTS AND FACULTY OF PHYSIC

OF THE

UNIVERSITY of MARYLAND

for the Degree of

Doctor of Medicine

by Thomas Louis Patrick

of Baltimore, Maryland

1859

The eye and its diseases have of late years attracted much attention from the profession and justly so. So valuable and useful an organ should receive the closest attention. No time and labor can be deemed lost that are spent in acquiring a thorough and complete acquaintance with its history. Here the student may see all the changes, that I might almost say, are capable of taking in place in the human economy. Into its structure enter all the tissues which compose the body, and what can be more favorable to the acquisition of a correct knowledge of Physiology and Pathology, than the study of an organ situated so superficially, and so easily

accessible to our senses and reason. It seems singular that these facts should not have long since been understood and appreciated but they are so now and schools and hospitals have arisen devoted exclusively to this part of Medical Scima. There are many distinguished men, most of whom are now living, towhom Medicine and its disciples must be grateful for their unceasing and successful efforts to place this branch of our Science in its proper light, and who by their untiring zeal have accomplished great and lasting goods.

More especially are we indebted to Drs. Lawrence & Mackenzie for the knowledge we possess of this disease,

the history of which I have chosen for the subject of this essay. They have left but little unsaid that could be of use to the practitioner and still better what they do say springs from and is corroborated by the extensive experience possessed by them in its management.

Purulent Opthalmia of infants claims our present attention, not only because of the great mischief that is every day perpetrated by it but also for the ease and certainty with which it may be led to a safe and favorable issue provided it be promptly and properly attended to. It is remarkable for its mode of attack, stealing as it

were unaware upon its victim and progressing silently and without alarm until the injury done by it is but too often irremediable. It is essentially an inflammation of the mucous lining of the eye, arising in and at first confined to that of the eyelids, and derives its name from the purulent discharge, which in general very quickly makes its appearance. It usually appears about the third day after birth, but may do so at any period, and commences in a manner little calculated to excite the fears of those unacquainted with its mode of onset.

In the commencement of the attack

little is noticed except some redness of the eyelids more marked at the angles. The lids themselves stick together when the child awakes and, if during this period they be everted, a little white mucus will be seen coating their inner surface. Some pain being experienced and the presence of light increasing it, the child obviates it by keeping its eyes closed. All of these symptoms being present in an ordinary attack of cold in the Eye, misleads the attendant into the belief that it is of no importance, that it will pass away without any troublesome consequences, and she either lets it alone or uses some use-

less application until the disease advances into the second stage, when the symptoms already existing are much aggravated and new ones arise. In this stage the whole case presents a more threatening aspect than at any other period during its continuance, and, it is in it, those changes occur that render the disease so formidable. The inflammation becomes more intense and extends to the conjunctiva covering the globe and from thence penetrates to the cornea. The eye-lids swell, become enormously distended and present a glistening, red, or erysipelatous appearance. Effusion takes place into the loose folds of the con-

junctiva, and these folds pressed upon by the orbicular muscle, are everted giving the phenomenon termed Ectropium. This result is especially apt to take place when the child cries and is usually only temporary; but, if these folds become unusually large, they may experience a kind of strangulation from the edges of the tarsal cartilages, and become of a dark or livid hue. The discharge in this stage is much increased and changes to a yellowish colour sometimes identical with that of gonorrhea. In children of a scrofulous diathesis it may become green, or may present a sanious character. It agglutinates the lids together and accumu-

lating within, on opening the eye it issues in a stream to a considerable distance. One circumstance with this symptom is of some importance, that the character of this discharge is oftentimes a valuable agent in judging of the severity of the attack. If it be small and light-colored, it is a favorable sign, and vice versa. This, however, only holds good in the majority of cases and in others it is of no value. The inflammation, when it penetrates to the cornea, is apt to be followed by one or all of several consequences. It may result in infiltration of its substance as evidenced by the more or less dense opacity; in ulceration, embracing the

whole or part of its circumference: the ulcers presenting a dusky-white appearance and irregular, jagged edges, or in sloughing which is known by the dirty yellow or brown colour of the sloughs. The injury done to the eye, when either of the two latter conditions are present, will depend upon the extent and part of the cornea attacked. If it has proceeded to perforation, and the anterior chamber of the eye be exposed, that may give way and the aqueous humor be evacuated followed by prolapse of the Iris, or the membrane containing the aqueous humor remaining intact a kind of hernial protrusion results. This, however, is not of frequent occurrence, and

and the former result is the most common. These changes when they take place do so very quickly, as we might suppose, judging from the extremely active circulation in infants. Both eyes are generally effected, but not at the same time; at least it does not attack both simultaneously. Pain during the whole course of the disease is never severe; provided, it be uncomplicated, but if, it extends to the neighboring tissues, it becomes very acute and of a lancinating or throbbing character.

S.

The causes which produce the disease are various, but in the large majority of instances, it is the result of contagion

Manifold testimony can be adduced sup-
porting this fact which cannot be doubt-
ed, but there is no question as to its oc-
casional occurrence from uncleanliness,
Catarrh, or other causes. Many persons,
particularly in the lower and more
illiterate classes, are possessed by the
idea, that Nature's efforts to sustain
the healthy function of this organ in
childhood are insufficient, and they
generally seek to aid her by applying
some reputed strengthening agent, as:
whiskey, gin, etc., and thus, by their
misguided efforts, excite the very ma-
lady they would prevent. When it
arises from Contagion, the mother
will be found to labor under some

morbid vaginal discharge, either leucorrheal or gonorrheal, which coming in contact with the child's eyes in its passage through that canal, thus gives rise to the complaint. Its diagnosis is usually not attended with much difficulty, particularly in the second and third stages, but in the primary stage it is often troublesome, may impossible to distinguish it from an ordinary attack of cold in the eye. Close attention to the history of the case with the concomitant circumstances will, in general, however, suffice for its recognition. It is distinguished from Sclerotitis by the difference in the arrangement of the vessels and by the

ecchymosis. In Sclerotitis their characteristic regularity is quite distinct from the irregular patches which are seen in this disease. The subject of its treatment next presents itself, previous to entering upon which a few words may not be deemed out of place, relative to the question of its prophylaxis. Competent authorities tell us that this disease produces more blindness than any other affection of the eye, and why should this be so? to whom does the blame belong, if any such there be? The history of the disease will itself furnish the answer. Its insidious nature and the character of its subjects both conspire to produce

such a result, and the reproach of this unpleasant censure is not to be attached to the medical man, one who has already more than his just share of the censure from our not over-charitable world. The mischief is done before he is consulted in the large majority of cases and it is not his fault, if he cannot restore a collapsed eye to its primeval beauty and usefulness. This, I admit, is by no means pleasant to contemplate; placing as it does the hope of remedy beyond our reach; but the reason is, I believe, the true one.

S.

For the treatment during an attack, the

indications to be met are, first: To subdue the inflammation; secondly, To remove its products, and thirdly: To attend to the state of the constitution.

If the inflammation have not advanced to ulceration or other structural change, we can with great certainty hope for a certain cure. The means by which this is to be accomplished are: depletion and local applications. If the inflammation be active and there be much swelling, blood may be taken locally by means of leeches, of which not more than one or at most two should be used. The upper eye-lid is the site for their application, and they should be placed in the middle of the swelling.

The apparently trivial amount of blood thus drawn is sometimes sufficient to blanch the infant and exert a most decided influence upon the disease.

This should be done although we should be prevented from seeing the eye, because of the ectropium or swelling. If, however, the eye be ecchymosed and the patient be weak and delicate, this measure must be resorted to with great caution, or perhaps not at all, and recourse must then immediately be had to local applications, which are of an astringent character.

Of these a great number and variety have been recommended and most of them no doubt possess remedial properties.

Among the best are: Sulph, Aluminae et potassae, Sulph, Cupri, Sulph, Zinci, and Nitrate of Silver. The first of these or Alum is highly recommended by Dr. Lawrence, who seems to have been remarkably successful in its employment. It is used in the proportion of from two to six grains to the ounce of water, and applied three or fours times during the twenty-four hours. The Nitrate of Silver is also very efficient and I should be inclined to place great reliance in it, from its well-known beneficial power in affections of a kindred character. It should be used in the strength of from one to three grains to the ounce of distilled water. All of these agents

will sometimes fail and must be replaced by some other of the same class. The eye should be frequently bathed with tepid water or other diluent, and the lids prevented from adhering by using some mild ointment, as simple cerate etc.,. The bowels must be kept free, and it is advisable to commence the treatment generally by the administration of some gentle Cathartic. Blisters are recommended by some and no doubt are of service; subject, however, to the general law, not to employ them in the stage of active excitement. They should be applied to the back of the neck or behind the ears. The everted lids should be restored

and, if this be found impossible, scarification of the conjunctiva and the application of solid lunar caustic will be of great service. This treatment will in general be followed by a change for the better; the swelling becomes less, the discharge decreases and changes to a lighter color, less pain is experienced from the presence of light and the eyes are exposed more freely, especially towards the evening, and the case progresses until complete recovery is established. In other instances the result, however, is not so satisfactory. The discharge continues though in a less degree, the swelling subsides but slowly and the whole case assumes a chronic character. In such cases

the fault is mostly constitutional. When the cornea becomes involved and is the seat of interstitial deposition; if it be severe not much can be done for its relief. If ulceration or sloughing supervenes, as I have before said, the injury done will depend upon their extent and location, and the same or more stimulating applications are appropriate. The constitution during the first stage is but little affected, but, at a later period, may become serious ly involved: diarrhea and other intestinal disorders appear, especially when the infant be of a feeble or other unfavorable habit, and the disease have advanced to ulceration or mortification

when not consequently so much irritation
is lighted up as either to destroy life quick-
ly or produce such changes as will soonor
or later end in the same result. In
such cases, Tonics and other remedies,
such as Sulph. Quinia, the prepara-
tions of Iron are required.
Such is a brief, but I trust not uninteresting recapitulation of the history of this important disease. It will be seen that the great secret in its management is: to commence early and as soon as possible, and if I have neglected noticing many of its varieties—
the necessity for brevity must be my excuse. I know that there are forms of the disease which I have

not touched upon, and differing in some particulars from that which I have described; but my object was to present a brief review of its most common variety. The others I leave to the judgement of the practitioner, guided by those general rules and principles which are the ground-work of our art.

An

Inaugural Dissertation

On Phthisis Pulmonalis

Submited to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By Wm Hampton Adams

of Easton Talbot Co. Md.

January 1850

Among the many deseases to which the human family is heir there are none more common or more fatal in its tendency than pulmonary consumption, and it behoves us as medical men, as philanthropists, as men whose life is or should be devoted to the benefit of suffering humanity, to neglect no means that may tend to lessen its dirfull sway. As yet consumption is ranked among the list of incurable deseases how long it will remain as such time alone can tell. The healing art is progressive one. Many deseases that ages ago were thought incurable have since found their specifics. Who knows but consumption may yet find the same antagonist to deal with.

I shall first take a brief sketch of its anatomical characters as a knowledge of this is essential to history and treatment.

Pulmonary consumption is dependent on an abnormal condition of the system which first developes itself by a deposition of tubercular matter in the lungs. This developes itself in different forms and of different characters. Sometimes it consists of round well defined masses, at other times in a flattened irregular form; often varying in form and shape to the receptacle which contains it. Tubercles may exist in almost every part of the body and in many parts at the same time. but I only propose to notice them as they occur in the lungs as their presence there is essential to this form of the disease.

Tubercular matter when first deposited in the lungs may be gray semitransparent, and hard, or yellow and somewhat soft. When they are minute and isolated, they called miliary tubercles or tuberculous granulations. When gray and semitransparent and hard gray semitransparent granulations. The lung is also sometimes infiltrated

with tuberculous matter. It is generally deposited in hard well defined masses and in which no pulmonary tissue can be detected. This infiltration may consist of grey tuberculous infiltration or of yellow tubercles or it may be a gelatinous substance and of a jelly-like consistence.

Progress of tubercle. In tubercles there is always a tendency to softening. In regard to the mode of softening there is a difference of opinion. Some contend that the process commences at their centre. Why this is so no positive evidence has been given. It is not from the contact of fluids from the fact that no vessels penetrate them. The most plausible theory seems to be that it may require a certain amount of time after their deposition, for the necessary change to take place before softening, and as the centre was first deposited it is first prepared for softening. Another theory is that the matter is deposited on the inner surface of the air cell and is

gradually increases. it encloses a drop of fluid. which fluid acts on the tubercle and thereby causes it to soften.

Tubercles may undergo another change. Cretification. This accomplished by the absorption of their organic constituents. This has been denied by many authors but the evidence seems decided in its favour.

Some pathologists contend that the yellow tubercle never becomes softened. that when change does occur they become calcareous changed into a horn-like substance.

Tubercles are first deposited in the upper portion of the lungs. and in a large majority of cases in the posterior lobes. and when seated in these portions they are generally found more thickly studded and in a more advanced stage in the upper portion. Consequently it is in this case that a cavity is first formed. Tubercles are found sometimes conjoined to

lung, but this is rare. The left lung is commonly much more affected than the right.

Tubercles are sometimes isolated and the tissue surrounding them quite healthy, but far more commonly they are thickly strewed over a large portion of the lungs and presenting various changes or stages the uppermost always being in advance. The lung becomes consolidated sometimes by an interminture of tuberculous infiltration and tubercle. In almost all cases where the desease has been extensive the pleura will be found adherent. This is an admirable resort of nature to prevent effusion from taking place into the pleural cavity.

A few words might be said in regard to the cause of tubercle.

The cause or origin of tubercle has has been the subject of much discussion by many eminent pathologist. Some hold that it is the product of irritation

others that it is dependant on an excess of Carbon in the blood; another that it on a deficient supply of phosphorus, and still another class contends that it is dependant on a want of muscular exertion and humid condition of the atmosphere. Strong arguments might be adduced to combat many of these. but the limits of a thesis will not permit. That it is not dependant on inflammation is to be fully proven by the fact that the products of inflimation are coagulable lymph and pus. Therefore when other products than these present themselves in inflimation. the conclusion is that there exists some other morbid condition inside from inflimation and to that condition should be ascribed the character of the product.

Again inflimation generally occupies the middle and lower portions of the lung while the pneumonic habitat of disease is the upper. That inflimation pro-

the deposit I admit, but I add that that there must previously exist a predisposition — a proper diathesis.
The theory that a want of muscular exertion, and humid condition of the atmosphere" will generate a tuberculous diathesis and provide material for tubercle seems to be accompanied with rational argument.
Abernethy States, "that he is inclined to the beleif, that "defecient performance of the functions of the skin to be the principal cause of pulmonary consumption": The performance of the skin and that of the lungs are closely allied. The skin has been called a "supplentary apparatus to the lungs". When we consider the close relationship between the one and the other we must nasasanly conclude that an interuption of the function of the one must of necessity embarass that of the other. And when the skin fails to perform its natural function that of elimina

ting the vitiated secretions from the blood through the act of transpiration it must exercise a pernicious influence on the lungs. It is a well known fact that air "eat with humidity" greatly reduces transpiration while dry air; especially cold and dry air favours transpiration. "Dry air causes sweat to disappear by its property for absorbing humidity; a moist air by its opposite property causes it to accumulate on the surface of the body." and consequently suppresses the functions of the skin, and favours the deterioration of the blood. It is thus that persons who are kept confined in close ill-ventilated apartments become etiolated, blanched, anemic, and finally consumptive. Statistics, and common observation alike prove the correctness of the above assertion. Where there exists a humid state of the atmosphere, there is a [illegible] and consumption [illegible].

Impure air and a want muscular exercise is the great propagator of Scrofula, which is followed almost invariably by a deposition of tubercles first in the lungs and then in various parts of the body. The strong man who has inherited a full development of the chest will bear up much longer than the feble scion of a consumptive family, but all soon or late must yeild to its invincible power.

Is phthisis inheritable? This needs no comment. The most skeptical admit its truth, and some go so far as to say, that without a hereditary claim it is not attainable. That it requires an exciting cause of much less magnitude to mature the latent germs in the heart of consumption, than it does to generate a diathesis I admit. But contend that all when subjected to a sufficiently strong exciting cause will soon or late yeild its captive.

Having noticed in as brief a manner as possible, the anatomical character, pathology and cause of Tubercle, I may next very properly proceed to notice the Symptoms which indicate their presence.

As the lungs are the seat of the disease we must necessarily expect to find some manifestation in their functions.

One of the earliest Symptoms noticed is Cough. It is at first dry and hacking, and often little more than a few imperfect attempts at coughing, and first felt when the patient first gets out of bed in morning. After a time varying in accordance with the severity of the case the cough becomes more regular occurring after any unusual exertion. The cough which was at first dry now becomes attended with a transparent mucous of a saline taste. This gradually becomes opaque and much

resembles the expectoration of common catarrh, to which it is generally ascribed. Emaciation now begins to come on. The patient feels that slight exertion fatigues him very much. Shooting pains are felt in various parts of the chest particularly in the side and beneath the scapulae; sometimes beneath the sternum. They are generally dull and aching in their character. When sharp and acute they generally depend on pleuritic inflammation.

This condition of things may last for months, or even years. But at length they become exagerated. The excitement increases, perhaps hemmorrhage occurs and establishes the diagnosis.

The hemmorrhage is generally slight at first and generally ceases spontaneously. After which there is apt to be a cessation of all the most urgent symptoms. And the patient is led to believe that he is fast [illegible].

But this is not always the case. Not unfrequently the symptoms become more alarming from the first attack of hemoptysis. In some cases the cough the pain and dyspnea are all attributed to the hemmorrhage. Often the sputa becomes more purulent, the pulse more hurried and feble, the pain more severe, the appetite more impaired on the occurance of hemmorrhage, and if there has been a large effusion of tubercles the symptoms may terminate in death — but more commonly in the second stage that of softening.

The above is a description of the disease as it occurs primarily and uncomplicated. Not unfrequently phthisis follows upon some inflammatory ~~disorder~~ of the ~~pulmonary~~ disorder of the pulmonary organs, such as pneumonia, bronchitis &c. when this is the case it is generally more rapid and urgent.

The second stage is marked by

softening of the tubercles. and is generally attended with increased excitement of all the previous described symptoms. The pulse is quick and feble. pain more acute, breathing hurried, cough violent and finally the expectoration denotes that an outlet has been affected.
In the third Stage. there is a still further agravation of the symptoms. Night sweats and colliquative diarrhea become obstinate. The patient has one or two exacerbations daily. generally morning and evening. the one in the evening being always most severe and often the only one noticed. These are followed by profuse perspiration. The appetite is now generally entirely wanting. the patient sinks low in bed. Nausea and vomiting often occur. the voice becomes feble or extinct the cough and expectoration ceases and death closes the scene. The intellect in most cases remaining unimpaired until the last.

Having given an account of the symptoms en masse, I may now proceed to describe them individually as each particular symptom seems to require particular [illegible].

First; Cough

As stated before this is at first dry and hacking. But as the desease advances it becomes attended with expectoration.

Expectoration. In ages past much attention was paid to the character of the sputa but that day has past, we now have more reliable tests at our command.

Dyspnea. This is a variable symptom. The patient may suffer the loss of a considerable portion of lung and not experience much difficulty in breathing, especially when free from excitement. The deposit of tubercle or loss of lung may have been gradual and the system have established tolerance. Later in the desease the drain on the system has been such, that it has lessened the quantity of

and quality of the blood; and from the fibre state of the system it circulates slowly, and consequently requires less air for its aeration. Very often though severe dyspnea is experienced throught the disease and especially before its close. This is especially true when it is complicated with pleuritic effusion, or pneumothorax, and also when there has been a sudden effusion of Miliary tubercles over a large portion of the lung.

Emaciation.

This occuring in a person of a strumous habit without any apparent cause is a fearful sign of impending phthisis, and should lead to the most scrutinizing examination —

Debility.

Though this is one of the marked symptoms it is seldom proportionate to the loss of flesh. Generally when there has been no profuse discharge the patient is able to walk about until near the

close of the scene.

Etiolation Many persons become pale and blanched even before the onset of the disease. This is especially true marked in women.

Appetite

This is variable: being sometime good and at other times almost wanting. In the last stage it is quite wanting.

Frequent Pulse

This is a constant symptom generally commencing with the cough and continuing throught the disease. It is said by some to bear a close relation to the breathing; each additional respiration above the normal standard adding from four to five beats to the pulse. My own observation has taught me that this is not correct. I have often found the pulse much accelerated while the breathing was but little above the normal standard. The pulse is

generally most accelerated during the evening—

Pain

This symptom often accompanies the disease through each of its stages. It is often felt early in the disease often the first symptom after cough. In a few cases it is wanting throught the disease. It is often dependant on pleuritic inflimation.

Hemmorrhage.

This may occur at any period of the disease. In the first stage it is generally slight. More profuse in the later stage. It may result from rupture of a blood vessel or from exudation.

Louis Considers hemoptysis a positive indication of the presence of tubercles (females attacked suddenly with amenorrhea excepted) but Dr Wood is inclined to differ with him. and states that he has seen hemmorrhage from the lungs of male subjects from

which they perfectly recovered without through the subsequent course of their lives exhibiting any sign of phthisis" I am inclined to favour the opinion of Louis. It is not a difficult thing to be misled by a patient's statement and mistake hematamesis for hemoptysis. Blood might escape during sleep from the nasal organs and find its way down the windpipe or esophagus and after inducing sufficient irritation be ejected and mistaken for hemorrhage from the lungs. When even hemoptysis occurs and not dependant on inflimation or external violence, I should be inclined to attribute it to the presence of tubercles.

Diarrhea

This is an ugly symptom occurring in the latter stages of consumption, and often difficult to treat. It is often followed and preceded by constipation. It is very often dependant on ulceration.

of some of the small glands situate on the inner surface of the intestines. These ulcers and the inflamation attendant on them is generally dependant on the presence of tubercles. The cough is often appeased during the violence of the diarrhea.

Circulation. This is generally dull and imperfect. The hands and feet often become cold and as the disease advances the lips and below the eyes become livid.

Voice.

There is generally more or less alteration of the voice, especially during the later stages, and amounting sometimes indeed to a total loss of voice. The loss of voice is generally dependant on ulceration in the larynx.

Sexual Functions

The sexual functions in women is generally

impaired. The Catamenia is generally suppressed, though women sometimes bear children after the second stage has become established.

I would remark here that the disease is quiesent during the parturient stage. The two conditions seem incompatible. Pregnancy develops a condition directly opposite to that of phthisis, and in accordance with the great law of antagonism prevents the further deposition of tubercle. Much might be said on this point but this is not the place, neither will my space admit.

Edema of the ankles and Aphthea

These symptoms seem to bear the same relation to this that they do to other chronic diseases. They portend the fatal termination. They seldom occur before the last few days of the disease and when seen positively indicate the closure

of the Scene.

Complications. These are numerous. Pneumonia is a frequent one. Bronchial inflimation is often set up during the disease by irritation. Pneumothorax may result by perforation of the pleura. Heart disease may be set up by and consequently dropsy of the chest. And it it is not unfrequent for meningitis to be set up where the disease attacks infants –

Duration.

This is extremely variable. It may terminate in the course of a few weeks, or linger for many years. The acute form has been known to terminate in the course of three weeks while the latent has been known to linger for fifty years.

Physical Signs.

In the first stage when

while the tubercles are yet thinly scattered, and especially if there be no constitutional symptoms: they are somewhat vague and require the most scrutinizing examination to make them out. But in the more advanced stage: when they are less important they are quite easy. In the early stage there will generally be slight dullness on and beneath the clavicle, especially towards the acromial extremity. This sign will be the more valuable if it occur on one side only: and especially if it be on the left side. It is well to bear in mind that the use of the arm tends to the development of the pectoral muscles; consequently, if the patient be left handed you must expect to to find more dullness on that side & vise versa. Not unfrequently you will detect even in this early stage a slight difference in the respiratory movement especially near the clavicle.

In the same situation you will find the respiratory murmur to be weaker than that of the corresponding side. In the same part you may often detect a jerking, catching kind of a sound. This is considered by some as an infallible sign of impending phthisis. To consolidation advances the respiratory murmur becomes more irregular and rough, and the sound of expiration becomes more lengthened. Often it is equal that of inspiration. The voice and cough also become more resonant. Sometimes these signs will be nearly wanting. There will be no dullness on percussion. The cough will be slight, or perhaps wanting. Respiration will be found weak, in some places and puerile in others. Subcrepitant rhonchus and mucous rhonchus will be heard in various parts of the chest and the diagnosis will be exceedingly difficult. In these cases we

should be exceedingly guarded in
out our diagnosis. We must
wait and watch its progress.
Its steady progress and want
of other signs will generally
inform us that it is not
pneumonia, but bronchial in-
flamation set up by the presence
of tubercle - It is of vital im-
portance to detect the disease in
this its incipient Stage - for it
is only at this time that any per-
manent relief can be extended -
When the disease has become
more advanced - all the Symptoms
become more, and more marked
dullness on percussion of amounting to
a total loss of resonance. The breathing
becomes more bronchial It is
necessary to bear in mind
that bronchial breathing is most extensive
on right Side - and that this is
especially true in women

~~in women~~. Finally the tubercles begin to soften and come away and auscultation reveals new sounds. The penetration of air through pus and mucus will give what is known as large crepitation, or mucous rhonchus. These finally become gurgling in their character and circumscribed. They are sounds indicative of the formation of a Cavity. They are heard during inspiration or in the act of coughing. I say these sounds are characteristic of a cavity but they do not nesasary indicate the presence of a bonica. They may result from an abcess in the lung; or what is more common a dilated bronchus. A cavity of any description containing both air and liquid will give these sounds, provided it communicate with a bronchi. If the cavity has become patialy empty you will

have a sound denominated pectoriloquy. This a falacious sound, and of itself is of but little value. It may be present without the existence of a cavity. It may result from a tumour resting on a bronchi: indeed any thing which renders the lung solid between the ear and bronchial tube, will convey the sound to the ear, and exactly simulate pectoriloquy. When the cavity has been emptied we have a new sound. Cavernous respiration. If the cavity is large it is amphoric in its character. The voice also in these cases is resonant. Percussion over the cavity generally remains dull, except where the parts are exceedingly thin: that is the cavity near the walls of the chest and the pectoral muscles thin, or emphasematous —

When the cavity is large and the walls thin, percussion will yield what is called the "Crack-jar" sound or amphoric resonance. Which can be well assimulated by striking the the distended cheek with the finger or as I think much better by placing the hand over the ear and striking that with the finger. This is caused by the sudden exit of air from the cavity through the bronchial tubes. This is proven by the fact that it can not be heard when the mouth and nasal cavities are closed.

Causes.

Predisposing — Among the foremost of these is the hereditary taint. That consumption is now no longer denied. Other predisposing causes have been discussed at sufficient length under the head of "cause or origin of tubercles". Anything which tends to debilitate the system to vitiate

the secretions, impoverish the the blood and impair nutrition predisposes to consumption.

Exciting Causes

These are numerous. Anything which tends to irritate the Lungs, thereby causing an unusual secretory effort favours the deposition of tubercle. It is thus that persons who from their occupations are constantly inhaling irritating substances. such as Stone cutters, needle pointers &c are extremely liable to contract the disease. Anything which prevents the ingress of proper amount of air: such as malformed chests and persons who from the nature of their occupations are compelled to keep their chests contracted. are liable to become consumptive. The sudden suppression of any chronic discharge will often set up the disease where

there is a constitutional tendency. Other diseases as low forms of fever and especially the exanthematous and also inflimation of the thoracic organs are extreemly apt to be followed by the disease where they occur in scrofulous constitutions.

Sex. The disease is far more common to women than men, and for obvious reasons. Their constitution habits of life &c all tend to make them more susceptible.

Diagnosis.

This in the early stage is often exceedingly difficult and requires a close examination into the present and past symptoms. If there has been a hacking cough, at first dry, then attended with a transparent mucous, frequent pains in the side and beneath the scapulae, emanciation without apparent cause, impe-

feat digestion; shortness of breath after any unusual exertion, accelerated pulse; and above all if there has been hæmoptysis, you may set it down that you have a case of phthisis to deal with.

There are a number of diseases with phthisis may be confounded, such as pneumonia, bronchitis and chronic pleurisy, but as a general thing a little time and a proper observance of the local and constitutional symptoms will be sufficient to make the diagnosis certain. The previous history of the case, family tendency, character of the pulse, disease of some of the chest; these together with the physical signs are generally sufficient to enable the medical man of this day, or any one, to pronounce with almost absolute certainty, the nature, character, and progress of the disease.

Prognosis.

In a vast majority of of cases this unfavourable, and especially when the disease has been inherited. I am not willing to admit that consumption is necessary fatal. That most cases run on to a fatal termination is true, but why? There are many things which tend to prevent a proper test of art, or rather prevents art from aiding nature as she might was she not prevented. The mental delusion which is always the boon companion of consumption, prevents us from instituting proper measures at a sufficient early period. Again, there is always such a degree of impatience and want of confidence with such persons that they are unwilling to subject themselves a sufficient length of time to proper remedial measures. That consumption is

at times fully cured, is fully proven by dissection. Reliable records prove that cicatrices have been found in the lungs of persons who have died from other desescases. And that they were healed bonacas is proven by the fact that tubercles in a calcareous condition have been found in the same lung. Let us hold then that consumption is a desease that admits of cure and treat it as such.

Treatment

In the treatment of a case of phthisis, we have two important indications. The first and most important is to tone up the general health to improve nutrition and thereby favour absorption and prevent the further deposition of tubercles. Second to combat any urgent symptom that may present itself, during the stage of softening and favour their expression.

For fulfilling the first indication that of that of correcting the diathesis by toning up the system and improving nutrition - I say for ~~the~~ to accomplish this there are several objects that claim our special attention. We must first endeavour to remove the influence the diathesis, by proper hygienic measures. of course assisted by proper medicinal measures. Here is an ample field for all our good judgment and discrimination. to decide what particular prescription may be best adapted to the case in question. We must take into our consideration the particular constitution of the patient, his habits in life, age, sex &c. Exercise in open air is requisite for all. Daily exercise on horse back. If he be weak in a sovereign. If his strength permit exercise on foot; and if near water, I would recommend exercise

in an open boat: taking care that the exercise is not too violent. This should be persisted in for a long period of time. He should always take care to dress to suit the weather. Flannel should be worn next to the skin especially during the cold season, thereby favouring transpiration. He should avoid excessive cold or heat. and especially cold damp air and this particularly, where a warm climate is indicated as by a lax constitution. If the circumstances of the patient be such as to permit him to change his climate, a place should be selected in a warm climate, where there is but little change where the atmosphere is dry and the air in motion as an elevated spot.

Combined with the above means. Medicinal measures should be adopted. The free use of cod-

Liver Oil when not contraindicated and when the Stomach will tolerate it, to gather with the free use of the wild Cherry bark. and other tonics when indicated. A wine glass full of the officinal tincture should be taken thrice a day. Much good is often derived from the preparations of iron, especially in anemic females. Some particular preparations have been particularly lauded for their efficacy, as the Chloride and the iodide. but you should always select that which best agrees with the patient. Iodide of Potassa has been much lauded in this stage of the disease, and likewise has almost every other article in the Materia Medica, but of all the first Cod Liver Oil stands at the head. Dr. Wood contends that it will if given in due time it will prevent the deposition of tubercle. but

of this, of course we have no absolute proof. But that it will alleviate is beyond controversy. It is indicated in all cases of Anemia, unattended with inflammation and local congestion. Should these exist they must be removed. To obtain ~~it~~ the good effects of the oil it ~~must~~ use must be persisted in for a considerable length of time. It generally requires from two to three weeks to bring about any appreciable change. The lighter kinds of the oil are preferable from the fact that they are less liable to vomitate the stomach. It should be given in small doses at first and gradually increased to a table spoon full three times a day. As the use of the oil induces plethora, care should be taken that hæmoptysis is not excited. Should inflammation occur in the course of the disease, it must be combated by proper remedial measures.

Such means should be instituted as are less likely to debilitate. Blood letting is ~~[illegible]~~ seldom or never admissable not even topical. Counter irritants are often of decided advantage.

As yet the remarks have been to the system at large; and are such as may be said to be adapted to all stages of the disease. ~~but~~ or at least to most of its stages but there remains something to be said in regard to local symptoms. These require special attention and will have to be noticed individually,—

One of the earliest symptoms is Cough. When this violent it may produce ill effects by irritation. It can, [illegible] combated by some of the preparations of opium. But care must be [illegible] not to induce constipation nor to

restrain the Bronchial Secretion.
Sometimes Cough is dependant on elongation of the Uvula, when this is the Case care should be taken it should be reduced by means of astringents or the Knife if required.

Dyspnea

This does not always require treatment. It often gives way to remedies addressed to the Systems at large.

Hemoptysis

As a general thing this subsides spontaneous. Rest, Low diet, refrigerant drinks &c are recommended. Common salt swallowed undissolved is said to have proved efficacious. Eight an oil of turpentine enjoy a high reputation. Revellants are also useful. dry cups, blisters, pustulation &c It generally to keep up the affect for some time, if the hemorrhage [illegible] [illegible].

Pain in the chest: This sometimes demands topical bleeding but rarely. Dry cups are generally sufficient. It is often relieved by the application of some reubefacient. A plaster of Burgundy pitch is often highly beneficial. All severe and irritating measures, such as the use setons, and extensive pustulation are objectionable. ~~on account~~

Bronchial inflimation.

This is often a very troublesome affection, especially in the later stages of the desease. The cough and febrile symptoms often derive their severity to the veritation there set up. In the early stages Tartar emetic or ipecacuanha in small doses will generally allay it. Later in the desease after expectoration has established more benefit will be derived from stimulating expectorants; such as Creasote, Assafetida &c. Where much nervous dis-

order, it will be proper to combine with them some narcotic substances.—

Hectic fever, and Colliquative Sweats.

As these are both exhausting and disagreeable, it is important to counter act them as early as possible. Many remedies have been extoled for their efficacy in these affections, but aromatic sulphuric acid stands at their head.— From five to twenty drops may be given ~~seve~~ in a wine glass-full water several times during the day. In some cases astringent acids prove highly useful. Tanic and gallic acid are the best.

Loss of appetite.

This should be corrected as early as possible, for without it nutrition cannot go on. A bitter alkaline infusion is often useful. A wine glass full the infusion of gentian or columbia, combined with some

Stimulant. Ammonia, for example where there is much debility will be found highly beneficial. From one to two pound ounces of the infusion of wild cherry bark will be found an excellent tonic and is especially indicated where there exists a feeble gastric irritation.

Vomiting and diarrhea.

If, in connection with this there gastric disorders, a few leeches might be applied but they are seldom admissible. The diet should be light & nutritious. Subnitrate of bismuth hydrocyanic acid & ice have been much extolled in combating this obstinate affection. Charcoal may be given with a view to absorb the acrid matter in the bowels.

In the last stage of the

can be done except support the powers of Life and assist expectoration. To fulfill this mild Stimulants may be given. Such as wine whey, milk punch &c.
Lastly, protect the depending portions from Sloughing. This may be done by insinuating beneath them bladders partly filled with water.

An

Inaugural Dissertation

On—

The Anatomico-Physiological

Condition of the Human Eye during

Vision,—

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine,

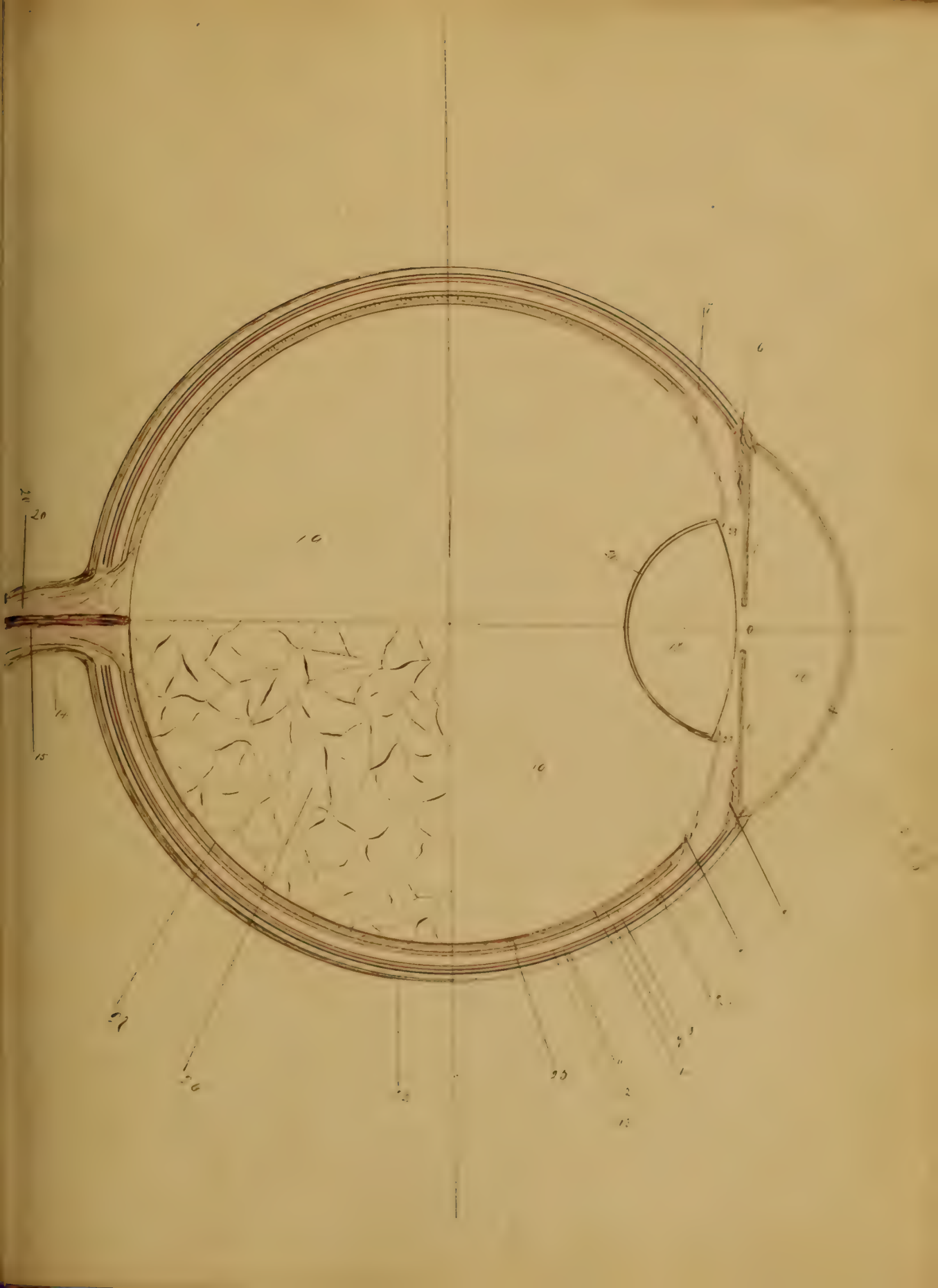
by

Louis Machen Eastman,

of

Maryland.

"The light of the body is the eye." Matthew 6. 22.



Description of Plate.

This plate is intended to represent a longitudinal section of the globe of the eye. 0. Pupil — 1. Cornea — 2. Conjunctiva — 3. Cornea Propria — 4. Cornea Elastica — 5. Lining membrane of the chambers. 6. Ciliary Processes — 7. Zonula Ciliaris — 8. Membrane Jacobi — 9. Nervous membrane or Optic expansion, showing the looped termination of its fibres — 10. Vascular layer of the retina — 11. Venae Vorticosa — 12. Tunica Ruyschiana — 13. Membrana Pigmenti — 14. Sheath of the Optic nerve — 15. Arteria Centralis Retinae — 16. Anterior Chamber — 17. Iris — 18. Crystalline Lens — 19. Vitreous Humour — 20. Optic Nerve — 21. Canal of Petit — 22. Shows the posterior thickening of Sclerotic — 23. Posterior Chamber — 24. The Choroid, embracing its three layers — 25. The Retina, embracing its three layers — 26. The Vitreous Enclosed in the Hyaloid cells — 27. The Hyaloid membrane. Note! The red lines represent Arterial circulation — the blue veins, and the black Pronisceous layers, membranes &c not vascular in their nature.

The Anatomico-Physiological condition of the Human Eye during vision.

Of the different organs through which the soul communicates with the external world, none is so delicate, beautiful, accurate or important as the eye.

As by the aid of the telescope the eye is permitted to view worlds and systems of worlds, which, without it, must have been forever undiscovered, - so, by the aid of the natural eye the soul beholds the beauty, grandeur or sublimity of nature and art, which, without it must ever be enveloped in the (mysterious) veil of Ignorance.

One may hear the rustling of limbs

and leaves without bearing the least conception of the natural beauty of the tree! — May smell the sweet odors of the garden-flower, and know nothing of the charming beauty with which God has painted its delicate folds! — May taste the rich flavor of mellow fruit and be ignorant of its color and appearance! And may feel the velvet leaf of the lilly, but never witness the purity of its bridal white. It is through the eye alone that we can behold the golden rays of the setting sun, — the distant mountains robed in blue, — the crystal lake sparkling with beauty, and the re-reflection of light from the ocean's surface in the calm hours of moonlight.

The Eye may be divided into

i Membranes
ii Chambers — and
iii Humours.

I. The membranous Structure.

If in the dissection of an onion we peal off one layer or fold and notice the relation it bears to the layer or fold beneath, we form a good idea of the relation existing between the membranes of the eye; — one lying over and covering the other until the whole structure is complete. These membranes form three complete layers or tunics, and each is composed as follows —

First — of Sclerotica and Cornea
Second — " Choroid, Iris and Ciliary processes.
and Third — " Retina and Zonula Ciliaris

First Tunic.

The posterior four fifths of this tunic is formed by a dense white fibro-serous membrane, the Sclerotica, and the anterior one fifth by a circular concavo-convex membrane, - the Cornea.

First. Sclerotica.

This membrane which is obtained from the dura mater is reflected around the optic nerve and forms its sheath; following its course it aids in covering its external expansion and forming a strong sack or coat internal to which are developed those physical phenomena the existence and union of which constitute the organ of sight.

This membrane is thicker posterio-

orly than anteriorly where it is bevelled to receive the rim or edge of the cornea. It also gives attachment to the different muscles that move the ball or globe; and is covered partially by a mucous membrane, the brilliancy of which has given rise to the popular expression "The white of the eye." Beneath this, the Conjunctiva and immediately in contact with the Sclerotica anteriorly is a tendinous layer or membrane the Tunica Albuginea, derived from the expansion of the tendons of the four recti muscles. Posteriorly and at the point of entrance of the optic nerve the sclerotic forms a cribriform lamella, the Lamina Cribrosa, through which the [illegible] nervous filaments pass. The [illegible]

Centralis Retinae passes in its course to the eyeball, is somewhat larger than the rest and is called — Porus Opticus.

The value of this membrane is chiefly the support which its density and strength enables it to afford. Owing to the white fibrous tissue it contains it is a frequent seat of rheumatism.

Secondly. — The Cornea.

This is a transparent membrane forming the segment of a smaller circle than that described by the sclerotic and fitting into the bevelled edge of the same as the crystal of a watch into the case which contains it.

The vertical diameter is said to be

somewhat less than the transverse, but this is owing to the overlapping of the sclerotica above and below,— internally, these diameters are equal, or its circumference describes a perfect circle.

The Cornea is composed of four layers, viz., first- Conjunctiva, which is continuous with that heretofore mentioned. Secondly.- The Cornea proper, which is composed of a number of lamina cemented together by areolar tissue. Thirdly.- The Cornea Elastica, which is composed of elastic tissue and is extremely transparent, and Fourthly.- The lining membrane of the anterior chamber.

The Cornea admits light and refracts it in such a manner that it

may fall on the lens behind. This it does in two ways or rather by two means - first by its density and secondly, its convexity.

Second Tunic.

This tunic is composed of a vascular membrane, the Choroid, - a muscular ring, the Iris, and the Ciliary ligament which is the circle of union between the two. The Ciliary processes are simply the interlacing of the folds of the choroid internal to or behind the ciliary ligament and Iris.

First. Choroid.

This membrane is composed of three layers - First, or External consisting of veins arranged in a peculiar manner and technically termed Venae

Vorticosae. These return the blood which is furnished to the eye by the middle layer this membrane.

Secondly. Middle or Arterial Layer or The Tunica Ruyschiana is composed of ramifications of minute arteries which supply the blood which is afterwards returned by the Vasa Vorticosae. It is this layer that forms the ciliary processes.

The third or internal layer is a very delicate membrane composed of hexagonal cells resembling in form and appearance a tessellated pavement.

These cells contain minute granules of Pigmentum Nigrum which have given rise to the name of this membrane Membrana Pigmenti. The color of this membrane is found in its vascularity. The

black paint found in its internal membrane is to absorb any rays of light that may pass through the retina and thereby prevent their being again thrown upon that membrane, which would so interfere with the picture there formed as to render this, the most beautiful and useful of the organs of sense, useless and troublesome.

In the Human Albinos, where this pigment is wanting, the light, falling more than once upon the retina, so dazzles their vision as to make it impossible for them to recognize, while the sun is shining, even the most familiar objects; but just before the sun has risen or immediately after he has set, when the rays of light are not so numerous, and, from their reflection and re-

-fraction not so powerful, we find that vision is partially restored, and that, to a considerable extent.

It is this paint that gives the dark color to the hair, and when the hair is found of a whitish color, showing a deficiency of this pigment it is almost necessarily connected with a want of it in the eye, i.e. imperfect vision. I once met a gentleman from one of the counties of our State, who presented exactly the phenomena related above.— His hair,— if it contained any coloring matter at all possessed so slight an amount as to render any coloration imperceptible to the eye, and, the truth was, his organ of sight was [illegible] [illegible] [illegible]. During the middle of the day (if it was clear) he was led about by another

person precisely as the blind are guided, but as soon as the brilliancy of noonday withdrew and the soft and gentle rays of twilight approached, his guide was unneeded, and by the aid of uninterrupted vision he could find a path even in the most difficult places.

Secondly. The Iris.

This, from the variety of colors in which it is found in different persons is named from the rainbow, and is formed of two sets of muscular fibre, one, the radiating, passing from the circumference of the membrane toward its centre and terminating in the boundaries of the pupil; and the other, or circular fibre, passes around the central opening like a sphincter. The former dilate or contract the pupil, as its stimulus, light, varies

in quantity and brilliancy. Thus we find, when on the one hand we pass from a lighted hall immediately into a dark apartment we cannot discern a single object, but remaining a few minutes, as the stimulus that caused the contraction is no longer present we find it gradually dilating, — more light is admitted, — a picture is formed upon the retina, — we see! While on the other hand if we return quickly to the lighted room, we are equally blinded, not from a want of, but an inordinate amount of light, which from the [illegible] diameter of the pupil is admitted, and falling upon the delicate retina so disturbs the picture as to annul for a while the functions of the eye or the phenomena of vision. But again, remaining

seen a moment, the light stimulates to contraction of the pupil, - a greater amount is admitted, a proportionate impression formed and again we are permitted to enjoy those pleasures of sense, that the optic expansion alone can impart.

The latter or circular muscular fibre simply lessens the area of the iris by their contraction.

Posterior to this muscular layer of the iris we find one, which, from its deep purple but that is said to resemble the appearance of ripe grapes is named uvea. The value of this layer is simply the absorption of any scattering rays of light that might interfere with perfect vision.

Thirdly. Ciliary processes.

These are formed by the interlacing or plaiting of the middle and internal layers of the choroid, which of necessity are continuous with those layers posteriorly, while anteriorly they are connected with the ciliary ligament and pass directly behind the iris. Winn estimates their number to be about sixty. They are of different sizes the smaller fitting into the meshes of the larger. The whole is thickly coated with black, obtained from the folds or plaits of the Membrana pigmenti.

The Ciliary ligament or ring is the union of the Choroid and iris, of the Corneal and Sclerotica and of the first and second or external and middle tunics of the eye. This Ligament is hollow forming the Ciliary Canal or Canal of Fontana. Why

vessels should reach this ring before distributing or ramifying I am altogether unabled to say.

Third Tunic.

This is formed by the expansion of the external extremity of the optic nerve, the retina, and the Zonula Ciliaris which officiates in connecting the retina with the Crystaline lens.

First. Retina. This is composed of three layers - First - The external or Membrana Jacobi, is extremely thin and delicate and is composed of cells arranged in a tesselated manner. Dr Jacobs, the discoverer of this layer, believes it to be a serous Membrane.

Secondly. The middle layer or nervous membrane, is the expansion of the Optic Nerve. This is an exquisitly delic-

ate membrane embracing the vitreous humour. When in the dissection you remove this humour, a fine pinkish film-looking membrane will be seen retracting or curling upon itself, and this is the retina. The pinkish hue is due to the small amount of blood contained in its minute blood vessels, as its natural color, independent of this blood, is a bluish white.

There are many theories concerning the actual way in which the nerve fibre terminates. Valentine and his advocates supported the theory of loop termination, while Hanover on the other hand contradicts the existence of a single loop, and advocates their termination by free extremities. The microscope with which I examined the dissections of the

eye in the preperation of this paper was not powerful enough to determine exactly which theory contains the more truth or which is founded on the realities of nature; but were I to choose either as my belief I would acknowledge the existence of loops as the terminal extremities of the nerve fibres of the retina.

Third layer.— Internal or vascular membrane. This is composed of minute ramifications of the Arteria Centralis retinae; with their corresponding veins which nourish the membrane.

The point where the optic nerve enters is the only part of the retina that is void of the power of vision. About one eigth of an inch out side of this point of entrance is the Foramen of Soemmering

where vision is said to be most perfect. The yellow halo that surrounds this spot is called - Limbus Luteus. Secondly. The Zonula Ciliaris is a vascular membrane connecting the anterior margin or circumference of the retinae with the crystaline membrane, or capsule of the lens. It derives its vessels from the ramifications of the Arteria Centralis retinae. - This membrane lies directly below and in contact with the ciliary processes, from which it derives its black paint and immediately above and upon the Hyaloid membrane.

As it joins the lens a slight angular space is left which forms the Canal of Petit. This Canal is bounded anteriorly by the Crystaline [illegible]

posteriorly by the Hyaloid membrane, and superiorly and externally by the Zonula Ciliaris.

II. Chambers.

There are two chambers, an anterior and a posterior one.

First. Anterior.

This chamber is that space lying between the cornea in front and the iris and pupil behind.

Second. Posterior.

This chamber is that space lying between the posterior surface of the iris and pupil in front, and the ciliary processes, Zonula Ciliaris and Crystaline lens behind. It is much inferior in size to the anterior, but increases as age advances. Winslow and others have thought that the

iris is in immediate contact with the lens, but this is not the case unless some disease, as iritis, has caused adhesion. Petit has calculated the distance between the lens and iris in a healthy eye to be about one fifteenth of an inch. Both chambers are lined by a membrane which secretes the aqueous humour and is therefore called the "secreting membrane of the aqueous humour."

III. Humours.

First. The Aqueous Humour is a watery albuminous fluid with an alkaline reaction and is found in the anterior and posterior chambers. Its specific gravity is but little greater than that of distilled water, and the entire amount weighs but a few grains.

The refracting powers of this liquid are very small its chief value consisting in keeping the cornea in its perfect convexity and allowing the iris free motion by its lubrication.

Second. Vitreous Humour.

This constitutes nearly four fifths of the globe of the eye and is a clear jelly like Humour enclosed by a delicate membrane, - the Hyaloid. This membrane gives off lamellae which are directed inwards and form Compartments which contain the liquid.

This fluid has a higher degree of refracting power than the aqueous humour, but its great office is fulfilled in retaining a certain convexity of the outer coat of keeping the retina at a proper distance from the

Crystaline Lens.

In the centre of this Humour is a canal through which passes a minute artery which nourishes the capsule of the lens.

Third. The Crystaline Humour or lens. This is formed of concentric lamellae which lie upon and overlap each other. It is a double convex lens with a greater convexity posteriorly than anteriorly, and is situated immediately behind the pupil and imbedded in the anterior of the vitreous Humour. It is invested by the Capsule which is an elastic membrane and containing a minute quantity of fluid which is called Liquor Morgagnii. Dr Jacobs remarks that the substance of the

lens is connected with its capsule by areolar tissue, which, undergoing a cadaveric change forms this liquor.

The external layers of the lens are quite soft but the remainder increase in density as we approach the centre where there is a hard nucleus. The lens is held firmly in its place by the Zonula Ciliaris.

The great value of this humour is to be attributed to its refracting powers. Its form and density both aid in this attainment. Hardened in spirits the concentric lamellae seperate and the whole divides into three portions. Of the several preparations which I made of this lens, four I hardened in spirits, all of

these split into three divisions and in two of them I noticed the seperation of the lamellae. I also put three into alcohol with the vitreous humour attached, but all of the fluid contained in the hyaloid membrane was absorbed by the liquor without, and the membrane rendered opaque by the emersion was left attached to the lens.

This lens which is quite soft in childhood grows firmer and harder as age increases, and the spheroidal shape of its structure as found in the youthful boy, becomes flatter and flatter as the winters of time silver the locks of the old. If we consider but one of these phenomena, for instance, the first, that

the lens becomes harder in advanced life, we would reasonably expect all who grew old to have their vision interrupted to such an extent as to render them useless, without the mechanical interference of art in the production of artificial glass lenses such for instance as are worn in spectacles; for, if a soft medium (as found in the young) refracts the rays of light at such an angle as to form a perfect picture, we can readily see how the hardening of that medium (as in the old) would alter the angle of refraction, ergo, the perfection of the picture; but contrary to such an expectation, we find many of the age of three score and ten years, in whom, not-

-withstanding such hardening a perfect picture is formed, and this, I conceive can only be explained by remembering the second phenomenon, that the lens becomes less spheroidal in the aged; now, in accordance with the well known law of optics, that, refraction varies directly as the convexity and inversely as that convexity decreases, we find that, as in the old this lens is less convex, so it will refract less, and this minus of refraction, will often exactly counterbalance the plus of the same power from its increased density and thus the equilibrium is restored or maintained.

When either of these phenomena or powers prevail we find it, character-

-ized on the one hand by presbyo-
pia or by myopia on the other.
Time, space and prudence forbid
the mentioning in a manuscript li-
ke this of all, even of what man knows
of the phenomena which an alluvise
God has united in the formation of
vision, and with a very cursory gl-
ance at a few that we can under-
stand, I will gladly leave the re-
mainder which I do not, for older
and wiser heads.
The Cornea may be said to bear the
same relation to the pupil that the
massive gate of an eastern cathed-
ral does to the inner door of the San-
ctuary, - the gate admits the multi-
tude, while the door opens only for tho-
se who pay devotion to the gods; - the

cornea admits all the light that falls upon it, while the pupil, only that which serves to form the perfect picture of vision.

The picture of an object will be more perfect when the pupil is contracted; for, when the pupil is open, it lays that enters at its circumference passing through a portion of the lens nearer its periphery than those that enter its centre or at the circumference of a smaller pinhole, or pupil, and therefore more refracted, and being so, renders the picture obscure, this is termed Spherical Aberration, which in plain english is no more than unequal refraction.

When the elementary colors are unequally refracted, it is termed Chro-

-due aberration; this is characterized by a colored ring or halo that surrounds the picture of the object. The human eye is naturally achromatic and aplanatic; this, its perfect condition, when the focal aberration of the eye is deranged, and the picture formed either anterior or posterior to the retinal plane.

The focus of light, or the formation of the picture at the perfect distance from the lens, is dependant, not merely on the convexity and density of the different membranes and humors, but also upon the distance of the object from the eye, and hence, this cause makes no remedial provision, but an object in a landscape could be seen, and this, simply because it appears

to be at such a distance from the lens, as, that its refraction may bring the focus immediately upon the retina. But nature has happily succeeded in so constituting the crystaline lens and the parts that surround it, that by its movements and change of form it adapts a focus, so general in its external scope and so exact in its internal arrangement upon the retina, that the soul is permitted to view the mote trembling in the sunbeam, - the vessel sailing on the ocean, - the painted clouds rising from the horizon, - or the shining planets of a solar system! without feeling the slightest movement of the eye, or the delicate touch of that hand, which paints the pictures of vision there.

Whether this movement of the lens, is due to turgescence of the ciliary processes or the action of muscular fibre, is a question still open for discussion, my impression is, that the latter is the more plausible belief, though I can see no definite reason why both may not act simultaneously, and acting, produce the given result.

Many theories have been advanced to prove how the mind forms a right conception of [illegible] upright object [illegible] image of [illegible] object is inverted upon the retina; but I think the explanation of Muller [illegible] is the simplest and therefore the best yet advanced; they argue, — as every thing we see is alike inverted, their relation is the same, and the mind [illegible] the correct

impressions of infancy has acquired the habit of regarding them as upright.

Many are the phenomena of vision, and each, wonderful in their nature and beautiful in action. The rolling globe, the contracting iris, and the moving lens, are ever in motion, yet ever still;-

"Still as the morning sunbeam
As it kissed the blushing flower,
Yet shook not e'en the tears of night,-
The lingering dew drop, from its leaves,
Nor woke the wild bee slumbering in
its folds."

When we consider the scope of the natural or finite eye, and remember the words of inspiration,- He that formed the eye, shall He not see? What must be our conception of the infinite one?

May our actions be such, that, being seen they may be rewarded, and work out for us "an inheritance incorruptible, undefiled and that fadeth not away."

I know not how I can better conclude, than by quoting the words of the admirable Addison, "A beautiful eye makes silence eloquence, a kind eye makes contradiction an assent; an enraged eye makes beauty deformed. This little member gives life to every other part about us; and I believe the study of Argus inspires no more, than that the eye is the seat of power, that is to say, every other part would be mutilated, were not its force represented more by the eye than even by itself."

Finis.

A

Inaugural Dissertation

On the Pulse,

Submitted to the Examination

of the

Board of Censors and Faculty of Physic,

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

By

Barnum Offutt

of

Maryland.

The Pulse.

Among the many subjects which the student of medicine is required to investigate, and expected to understand, there is none, we conceive, more interesting and important than that which we now propose to consider. So important and interesting is this source of information in all morbid changes and conditions of life, that he would be considered a strange practitioner, indeed, who would visit and prescribe for a patient without examining the condition of his pulse. And yet, we are told a fact, either for want of proper study and attention, or in default of a peculiar tact in the art, a very few, comparatively speaking, ever appreciate the great value of this agent in the diagnosis and treatment of diseases. We may, therefore, readily conclude

stand that it requires much practice and experience to gain much useful knowledge of this subject; but, a theoretical understanding of it is necessarily presupposed.

Let us, then, in the first place, inquire what constitutes the pulse. We are told that it is the yielding and dilatation of the artery, but we presume this will not satisfy the student who desires to make himself master of the subject. He must dive deeper into its depths, for this definition implies but little. When standing by the bedside, we touch the wrist of a patient, we should know that the movements there felt, depend upon the operation and influence of more than one cause. We may here call to our aid the scene presented in the dissecting-room, where we behold the great fountain of life with

all its numerous channels to convey the vital stimulus throughout the entire animal frame. We cannot there fail to perceive that the action and movements of the pulse must depend upon more than one agent, and when we call to mind their inseparable connection, we can readily understand that many conditions of the pulse must depend upon all in conjunction. This constitutes the machinery by the operation of which, life is sustained and health preserved.

We behold the heart with all its intricacies and operations made simple, and learn that it is by the contraction and dilatation of this noble organ, pouring, as it were, its fluid contents throughout the system by means of the united vessels called arteries, that the pulse is

formed and regulated; and the perceives that the artery at the wrist is only one of the many distributed through out the system; but that this is chosen for inspection on account of its superficial position and convenience.

Understanding, then, its anatomical relations and physiological operations, we may very properly consider the pulse as an index to the actual condition of the heart, and the general circulation of the vital fluid; and its participations, therefore, in all morbid states and conditions of the general system must be self evident.

Knowing, then, the large catalogue of derangements to which health is subject, we must conclude that the variations and conditions of the pulse are very numerous - so much so, indeed, that some distinguished practical observers

have attempted to indicate the nature and extent of every morbid phenomena by this means; but we may consider this, I imagine, altogether too minute and extravagant for actual application.

The characters and conditions of the pulse which are generally noticed as most important and demand especial study and attention; all, as we have before said, depend upon, and are modified by, the action of the heart, the quantity of blood thrown out by that organ, and the condition of the arteries themselves.

By a frequent pulse, we readily understand a greater number of pulsations in a given time than is natural, which must depend upon the rapid contraction of the heart. A quick pulse is liable to be confounded with the frequent, but upon

reflection, we find them entirely distinct. The former implies a sudden stroke of the artery, but not necessarily frequent, whilst the latter implies a sudden & rapid frequent pulsation, but not necessarily sudden; and whilst the frequent pulse depends upon the rapid contractions of the heart, the quick depends upon its impetus and velocity, and is sometimes called the jerking pulse.

A strong pulse is one in which the artery offers a natural resistance to pressure, and is owing to the forcible contractions of the heart.

The full pulse is indicated by the size of the artery, being larger than natural, This, however, does not imply that it is filled with blood, but depends upon the relaxed and dilating condition of the artery. It is

also called the gaseous pulse.
The hard pulse is characterized by the tensely corded or wiry feel of the artery, and depends upon the tonic or spasmodic condition of the vessel. This pulse is usually, but not always, full. When small, and hard, it has been called the wiry pulse, and when hard, quick and small, the sharp pulse.

By the depressed or suppressed pulse, we understand one, which is weak and small, as indicated by the sensation imparted to the finger, and yet it becomes full and strong upon depletion. This condition depends upon a contracted or engorged state of some portion of the circulation, impeding the free movement of the blood and disturbing the action of the heart. We may, therefore, read-

ily perceive how the pulse will regain its strength and fullness when such congestion is removed and the general circulation thus regulated by depletion.

The irregular may be considered under three heads.— the intermitting, where an occasional beat is left out in otherwise regular movement; variation in the number of pulsations in a given time, and variation in the strength of the succeeding pulsations. The are told by Hebreden that the intermitting pulse is natural in some persons and becomes regular only in old age.

These and their opposite conditions are all the varieties of the pulse that we deem of practical importance, and we may with interest, notice some of the causes and conditions

of these various qualities.

The frequent pulse in disease, especially, is owing to an irritable condition of the heart, caused by the quality of the blood, debility, &c., and is diagnostic of nearly all fevers. This quality of the pulse, however, may be modified by, and depends upon various circumstances even in ordinary health — as age, sex, mental condition, &c.

It is generally understood that the pulse is more frequent in children than in adults, but gradually decreases until about the age of sixty, when, as a general rule, it again grows more frequent. There are, however, exceptions to this rule, owing to constitutional idiosyncrasy.

The pulse of females is allowed to be more frequent by eight or ten beats in the minute than that of males

at the same age.

Sanguineous and nervous temperaments sustain a more frequent pulse than the bilious and lymphatic. Mental emotions as joy, grief, anger, &c., are known to render the pulse more frequent.

The time of day is said to have considerable influence over the pulse. Some say it is more frequent in the morning; whilst others contend that it is more calm and less frequent in the morning; and judging from a review of what we have already noticed, we are inclined to receive the latter opinion, for we must allow that exertion and the act of digestion during the day have a considerable power in accelerating the pulse.

Position is also known to vary the

pulse which is less frequent in the horizontal than in the erect or recumbent position.
A more frequent pulse is found also in a warm than in a cold climate.
The quick pulse indicates preternatural irritability.
The strong pulse is usually present in all sthenic conditions of the system; as acute inflamation, &c.
The hard pulse is sometimes natural in aged persons, from ossification, or some other organic change in the artery or heart, but when frequency is combined, it indicates inflammatory action.
The irregular pulse is sometimes natural, and sometimes arises from organic affection of the heart, want of blood, or weakness in the heart's action; agitation of mind, disorder of stomach, &c. When it arises in acute disease, unless it be of the heart, it is very unfavourable. From the above

it would seem that the pulse alone would almost furnish a guide to the practitioner, but we must recollect that in all the conditions enumerated, there is none upon which we can rely entirely, without the aid of other symptoms.

In order to study the pulse properly, we must know and bear in mind the average number of pulsations in a healthy person, which varies from seventy to seventy five in a minute, but we must also recollect that there are many exceptions to this as a rule; some persons in perfect health having a pulse from eighty to ninety, &c., and some as low as sixty. One must also be aware that there are many difficulties to be avoided, and many advantages to be taken in examining the pulse.

On entering the sick chamber, if the pulse is examined directly, it should be felt several times before learning to know if there is any variation. The presence of a stranger is

physician will often cause additional excitement for a time, and by neglect of this simple rule, serious blunders may be committed. The arm should be perfectly easy, with all the muscles relaxed and all pressure removed. The pulse should be felt in both arms, as in some rare cases it is twenty or thirty pulsations more in one arm than in the other. The pulse of children should always be examined, if possible, while they are asleep.

Some persons advise to use a watch to count the number of beats, but we consider this unnecessary, for when we have felt the natural pulse sufficiently to become acquainted with it, we can easily detect any variation; besides, the practice of counting the pulse is apt to confine our attention too much upon its mere frequency, to the neglect of other important qualities. We may now readily perceive, that to become skillful in the tactus eruditus of this symptom, requires

much practice in the various kinds of pulses. All the various qualities except that of frequency are detected only by feeling and sensation.

It may not be amiss to notice those qualities of the pulse, which must imperatively indicate the use of the lancet. We have seen, The frequent pulse is often natural, and it occurs also in irritable conditions, and from debilitating causes. Mere frequency, then, does not justify venesection. On the hand, we have also seen, does not call for the lancet, for it is found in many cases of ordinary health, mostly in old persons; but when the frequent and the hard pulse are combined, the lancet must be used.

The opposite is another quality which calls for depletion, and this is known by the increase in its strength, while the blood is flowing from the vein.

These seem to be the only two conditions which imperatively demand the use of the lancet; these conditions depend much upon circumstances. Thus a soft pulse may demand excessive depletion, if there is congestion or engorgement of any part which obstructs the action of the heart. This is sometimes the case in pneumonia.

In apoplexy, we are to find that the pulse is preternaturally slow, and yet when we consider the determination of blood to the brain, we readily perceive the necessity of depletion.

Mrs. Lawrence tells us that in the small pulse, when the heart beats persistently strong, or than the artery, venesection is indicated, and vice versa; but we think that, unless this difference is considerably marked, it would be a difficult point to determine.

Thus we perceive that a correct

practical knowledge of the pulse is a very powerful agent in the physician's hand, and must require years of practice with unremitted attention to secure its advantages.

Barrack Offutt.

An

Inaugural Dissertation

on

Inflammation.

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland.

for the

Degree of Doctor of Medicine.

by

James Hamilton Gurney.

In the whole list of diseases to which the human family is heir to, there is none that presents so much interest alike to the Surgeon and Medical Practitioner, as the one I have selected as the subject of my Thesis.

But it would require a volume of considerable size to treat of it fully, therefore I must content myself with giving only a general outline of this interesting and varied disease.

— Inflammation may be defined to be an impairment of function, of altered nutrition, with increased vascularity and sensibility, with a tendency to Morbid secretions.

The signs of which are Pain - Redness, Heat and Swelling. When an irritant is applied to the part about to be inflamed the impression is first made upon the nervous system and then upon the blood-vessels. More blood is sent to the part than in health, and being thus stimulated, blood is invited in still larger quantities to the part. Not only is there

carried to the part by its usual route, but those vessels which previously carried it away, now bring it to this point from other parts and thus contribute to the morbid process that is going on, and in this way is the Embryo of Inflammation planted. But this condition of things continues to increase, the capillaire vessels dilate and the red-corpuscles of the blood that could not circulate in the minute vessels before, do so now with the greatest facility, they run to and fro in every direction till by the large number present their motion is arrested, and to relieve their distended vessels pour out the serum of the blood into the surrounding parenchyma and in this way is inflammation fully established.

But of the symptoms of inflammation, and the first of these I shall consider is that of pain. This differing greatly as it occurs in different parts. Thus it is burning or tingling in the skin, throbbing

in the cellular-tissue, sharp and lancinating in the pleura. dull aching, oppressing in the stomach, Kidneys or Testes, It is always more severe when the products of inflammation are confined, when occuring in dense, firm and resisting parts, as in bone and ligament: and comparatively slight- when the opposite of this is the case, when the part is yielding and extensible, It is sometimes felt at a distance from the inflamed part: as at the knee in coxalgia, at the shoulder in liver disease, at the orifice of the urethra in disease of the kidneys, But it is not always an attendant upon inflammation for we frequently find adhesions of the pleurae and of the pericardium after death in those who had had no evidence of inflammation of these parts at any time during life.

The cause of the pain when it is present is due to the stretching of the new fibres supplying the part: and partly to the disordered

sensation accompanying the disorder of nutrition and of function. The redness is also due to the larger amount of blood sent to the part. Merely dilatation of the capillaries takes place and red blood is permitted to circulate in vessels now that were too small to admit the red globules of the blood before.

The brightness of the colour is influenced to a great extent by the character of the inflammation. Thus in the acute it is of a bright-scarlet tinge of arterial blood. In chronic, it is of a dark venous hue, and in certain Specific inflammations it is of a purple or copper colour. The heat attending inflammation is due to the influx of blood in part, and in part to the action of the Oxygen of the blood upon the Carbon and hydrogen of the tissues by which action heat is evolved and the temperature of the part considerably increased. The temperature of the part however does not always exceed

that of blood-heat. But it is always increased more than it would be by simply sending an increased amount of blood to the part without regard to the chemical changes I have just alluded to. For we are taught that in some cases the temperature is raised upto from one hundred and five to one hundred and seven degrees. And if this be true, it must be due to this increased chemical action, increased, because more blood is sent to the part and of necessity more Oxygen to act upon the Elements of tissue. For while the concentration of the blood in any part would increase the temperature of the part it could not raise it above that of blood by which it is fed. The heat however, seems much more intense to the feelings of the patient that it really is - in consequence of the altered condition of sensation. The swelling is also due in part to the influx of blood. but principally to the exudation of serum that takes place from these

congested vessels. Or it may be to blood which has escaped from the vessels, or to lymph. As the inflammation advances the exuded matter is either absorbed or converted into pus. So that in the stage of active congestion it depends upon the blood dilating the small vessels, in the stage of true inflammation it depends upon the exuded serum, and at a still later period, it depends upon the presence of pus. The increased sensibility attending inflammation is well illustrated by the intolerance of light in Retinitis, by the tenderness of the skin in Erysipelas, by pain induced upon taking food in gastritis, by the almost constant micturition in Cystitis, and by the lancinating pain occasioned by moving the leg in inflammation of the synovial membrane of the knee. The disorder of function is shown by the dryness of the skin, by the kidneys not secreting urine in proper quantity, by the incapability of the stomach and bowels to carry on the

process of digestion as in health, and if the brain or Spinal cord be the seat of disease by the convulsions or the paralysis coming on in one or other of the cases. — The causes of inflammation may be most conveniently divided into predisposing and exciting. The predisposing may be divided into the constitutional and local, the constitutional predisposing causes are plethora, the sanguine temperament, excess in food and drink, bodily exertion, exposure to miasmata, and disorder of the liver, kidneys, skin and other organs whose office it is to purify the blood, when inflammation arises from these causes alone it is said to be Spontaneous, the local causes are previous disease, and original weakness of organization with a gentle stimulation over the power of endurance and continued for a long time. The exciting may be direct, such as the chemical effects of acids, salts, &c. or mechanical effects of wounds,

pressure &c. Or they may be indirect or vital, such as heat and cold, cantharides, and turpentine or specific, as in the vaccine virus and the syphilitic poison —

The post-Mortem appearances of recent inflammation are redness, softening, swelling and infiltration of serum, [illegible], pus or blood.

The redness if very slight may fade from the inflamed skin after death. But to ascertain that inflammation has really been present, inject the blood vessels that supply the suspected part, and if it has been present, the vessels will be dilated, an evidence of greater vascularity than is natural, beside the part would be softened and more or less effusion into the surrounding tissue. the epidermis would peel off more readily than in healthy parts.

But the redness may of arisen during life, not by inflammation but by congestion, due to some obstacle to the return of blood.

Congestion may also be attended with softening

and serous effusion, so that in some cases it would be almost impossible to say to which causes the changes were due.

It is said, however, that in the congestion due to the causes I have above mentioned the larger veins are distended more than the capillaries and previously to them, while in inflammation the reverse of this is the case, the capillaries are more dilated than are the adjoining veins. And it is also said that in congestion the blood is dark and venous, while in inflammation it is red and more of arterial hue.

Last lastly the sickness will have to be distinguished from certain conditions found after death and caused by other things than those I have just repeated, and first that caused by the action of the capillaries after the heart has ceased to beat, by which action the arteries are emptied, and the blood forced into the various internal organs, especially the Lungs and Skin.

Next secondly from that condition where cause

is found in the influence of gravity, by which the most depending parts of the body become more or less congested.

The results of inflammation are resolution, and what I shall call the effusions of inflammation, viz. suppuration, ulceration and mortification. Resolution is the most favorable result that can occur, and consists in the restoration of the part to its healthy condition both as regards its structure and function. The effusions of inflammation are caused by an attempt of nature to cure the disease by pouring out serum and lymph. If serum be poured into cellular tissue it there constitutes oedema. If into the serous sacks, it is called dropsy, receiving a special name from the particular cavity into which it is effused. The effusion of fibrin requires a higher degree of inflammation than that of serum, upon the subsidence of which new structure is formed by the organization

of the effused lymph. and thus are parts furnished with proper material for their repair, Hemorrhage occasioned by the distruction of the coats of the vessels is called active, while that exuding from the dilated vessels is called passive, Suppuration consists in the formation of a matter called pus. When healthy it presents a yellowish straw colour of a creamy consistency and opaque, It is insoluable in water but mixes readily with it when agitated with it in a bottle, It has no odour and is said to be of a slightly sweetish taste,

It is not corrosive but bland and unirritating, acting as a protector to tender granulations until covered with their proper covering, when confined it produces disintegration of tissue, by virtue of its pressure, It is composed of globules and globulles the fluid is the liquor sanguinis of the effused; this separates into serum and fibrine; the fibrine becomes granular by the formation of exudation corpuscles and these

degenerate into pus-globules. When pus is thin and acrid it is termed ichor, consisting mostly of serum, and when mixed with blood is called sanies. When suppuration is long continued it exausts the system, prostrates the powers of life, and produces hectic-fever. Ulceration consists in the progressive softening, disintegration, and removal of the affected tissue. This removal is due in part to absorption and in part to the tissues being broken up and thrown off with the pus. Mortification signifies the death of the part. Inflammation is always modified by the constitution in which it occurs, being active and rapid in the young and healthy, but more indolent in the aged and debilitated tending to destructive processes. It also presents a great diversity in form as there are many causes giving origin to it. It is still further modified by the structure of the part which it invades.

it is in serous cavities and in the cellular tissue, parts having no natural outlet it is more disposed to produce adhesions than suppuration

While in mucous Membranes it tends to produce suppuration,

While the process of inflammation is going very important changes are wrought in the blood

We know that if blood is drawn from a patient laboring under inflammation, that after coagulation has taken place the clot will present a buffy appearance and cupped in its central portion, these appearances have been variously accounted for. One set of men contending that they are due to the destruction of the coagulability of the blood. by which means the red globules of the blood have time to settle to the bottom of the vessel before the coagulation takes place, an other set contend that the specif gravity of the red globules is increased in inflammatory blood so that they form themselves quickly into a

spong work, which at once contracts upon itself and sinks towards the bottom of the vessel squeezing out some of the liquor sanguinis from its meshes before the latter has separated into fibrin and serum, this fibrin being deposited upon the surface of the spong-work now constitutes the buffy coat, This contracting gives the clot the cupped appearance, These changes are regarded as very important, are not now viewed as pathognomonic of inflammation, For we know that much depends upon the manner in which the blood is drawn and also upon the vessel into which it is received, It is necessary that the blood should flow in a free and full stream, and received into a deep narrow vessel, and that the temperature should be kept pretty high, And then we know that they are frequently present when there is no inflammation, as in pregnancy, in plethora, and in those persons who have been bled at regular periods

of the year, nor is it of much importance in establishing the degree of inflammation existing. For it is often absent, or present in a very small quantity in some intense inflammations as those of the mucous membranes and cellular tissue, while in rheumatism it is present till the very last trace of the disease has been removed, though bloodletting be practiced time and again until the system is almost drained of its blood, till the last drawn blood will present the same buffy-coat.

The treatment of inflammation consists in removing the cause when it can be ascertained, and afterwards to diminish the inflammatory action and prevent effusions, and lastly to remove whatever products of inflammation may be present. To accomplish these ends we have access to a class of remedies called the anti-phlogistic, which consist in the regimen - bloodletting, purgatives, emetics, diaphoretics, diuretics - Mercury - Antimony, opium and

the local remedies, every thing that would be likely to irritate or excite the patient should be religiously prohibited. rest in the recumbent posture with a cool air and free ventilation with an exclusion of light and sound, one or more of these directions should be enforced according as one or another part is the seat of disease.

But the diet and in short the whole regimen must be modified to suit individual cases. in the aged and debilitated, the nourishment must be stronger and supporting,

Blood-letting may be divided into general and local, — general blood letting is only required when the inflammation is very intense or when important organs are involved, such as the brain - lungs &c —

If resorted to unnecessarily it will produce debility atrophy and effusion, if carried, so far the natural stimulus of the heart being thus withdrawn, the circulation flags, pressure and the brain being deprived of its proper

amount of Arterial blood, fatal syncope or fainting is sometimes produced. the benefit obtained from bleeding is not due to the simple removing of the superabundance of blood in the system, but also in part to the sedation induced by the bleeding, whereby the vessels supplying the inflamed part are enabled to recover their natural tonicity and their healthy condition.

General blood letting should not be regulated so much by the amount of blood drawn as by the effects produced upon the pulse. for it would be much better to open the vein the second or even the third time, than to seek to extract a given amount of blood from the circulation. It should be borne in mind that a smaller quantity of blood taken from the system the second or third times will produce a marked impression upon the pulse than was necessary at the first bleeding to produce the same effect.

Local bleeding is practised in three cases

where the inflammatory action is not high where the powers of life are weak. where the inflammatory action is fully established in the part and no possible good could arise from venesection. and where extreme age would forbid its use, the mode in which blood is extracted locally is in one of two ways, either by cups or by leeches the latter of these being the best adapted to young Children — Purgatives are of no less importance where they are not contraindicated than is the blood letting. they deplete by causing a serous drain from the intestines. they also act as derivatives and prevent assimilation of nutrition, they are contraindicated in inflammation of the bowels or in any attack where the going to Stool would be attended with any great amount of inconvenience to the patient. As in bad fractures for instance,

Emetics are useful in the early stage to unload the Stomach and aiding in getting rid of

any foreign substances there existing,
Diaphoretics and diuretics are both useful in promoting the secretions the one from the skin and the other from the Kidneys. and are indicated as long as the inflammatory fever continues as evidenced by a hot and dry skin,

As an auxiliary to bloodletting Mercury is one of the most important and efficient of the antiphlogistic class, not only as a purgative, but when introduced into the system so as to establish its constitutional effects, it stimulates the absorbents and thus promotes the removal of the effused products of inflammation and at the same time prevents the effusion of more,

Antimony as a sedative, is second only to bloodletting. No article in the whole list of remedies so much deserves the name of an edgeless Lancet as the one now under consideration. If Antimony be given in small and repeated doses so as to produce

nausea and short of vomiting, a rapid and marked diminution in the pulsations of the heart both in frequency and in force will be seen. But this great agent is objectionable in some cases of inflammation, for instance in inflammation of the stomach no one would think of giving it.

Opium does a vast amount of good in certain conditions, after blood letting has been practiced it so that the nervous system, relieves pain, and prevents undue reaction from occuring, it is most generally given in connection with Mercury when that agent is indicated.

The local treatment is often of more importance than is the general treatment, if the inflamed part can be elevated it should at once be done, it thus aids in returning blood from it, and at the same time causes the blood to flow more slowly and in smaller quantities

to the inflamed part. Cold applica-
-tions are of a great deal of importance, they
diminish heat and cause the blood to
recede from the part to which they are
applied, But to be of any importance
the application must be continued after
they have once been instituted, for the reac-
-tion that comes on after the application
of cold to a part, unless that cold be con-
-tinued, would do infinitely more harm
than good. among the best cold appli-
-cations are to be mentioned Ice. Iced
-water, the solutions of Sugar of Lead and
Muriate of Ammonia. Cold applications
are called for in the early stage of inflamma-
-tion, that is the stage of congestion,
after inflammation is fully established,
the part swelled and very painful a
good deal of comfort and ease may be obtained
from the application of warmth and
moisture, Poultices of various kinds

are used and are a very pleasant application.

In some cases much good will be obtained from the application of Nitrate of Silver. Iodine is also very useful.

Counter-irritation is often productive of good. Dry cups, blisters, Setons, Issues, and the actual cautery all have their appropriate places in this class.

An

Inaugural Dissertation

on

Diagnosis

Submitted to the Examination

of the

Provosts, Regents, and Faculty of Physic

of the

University of Maryland

For the Degree

of

Doctor of Medicine

by

Philip Barton Duvall

of

Maryland

Feb. A. D. 1859

[illegible]
One through [illegible]
most undoubtedly, one of the most
important branches of general pathology. Taken in the sense in which
I here employ it — it signifies that part
of medical science, which teaches us
how to discriminate diseases, one
from another — and if that should be
impossible from the circumstances of
of the case — to recognize the condition
of the system, as compared with another,
that we may vary our treatment accordingly.

Being called to a patient, we almost
chemically ask ourselves what the dis-
ease is — under which he labors. This
is often, a very embarrassing question, even
to [illegible] of [illegible] [illegible]
experience. [illegible] [illegible] [illegible]

must it be to the young, timid and inexperienced practitioner?— How shall it be answered? What [illegible] by which we are to be governed?— And how shall we give a creditable responce to that question— secure the safety of the patient— who is most interested— and at the same time, do justice to the profession, of which we are members— and for whose dignity and honor, we alone are responsible.

There are many diseases, whose symptoms are so evident that but, little difficulty would be experienced in making a correct diagnosis— but on the other hand there are many, which are so very obscure— that it would be nearly impossible— in the present state of our science to appreciate. Much we do know, and much we shall have

[illegible] and [illegible] judgment [illegible] [illegible]
edge of pathology and the help of
any thing which to judicious and
careful reasoning may be thought
to have some influence in the
production of what we see. The
friends of the invalid are often very
useful in these cases. [illegible]
notice whether any vessels bottles
as any thing else remains in the vi-
cinity of the patient from which he
might have taken some [illegible]
and drug. Examine the [illegible]
teeth gums fauces and [illegible] the
general appearance of the patient
the pulse the eyes breath, lips
whether any stain he lefts upon
the clothes of the patient or upon
the covers of the bed. Whether there
be false [illegible] of motion

ity or touch of any part of bidys-
ean. Whether he be breathing rapidly
slowly or laborious. These
are very important circumstances
to be taken into consideration. When
the nature of the disease is quite
evident, we should not lose time
by indulging in a too prolonged
course of investigation, because
by so doing we are not only doing
that, which is unnecessary, but are
also wasting time, that may be very
precious to the patient as well as
to ourselves since we have our
reputations to preserve.

There are certain signs, or
symptoms belonging to certain
complaints which, when taken
together may be quite conclu-
sive as to what their nature is.

The statements of the former may or may not be correct at any rate they should not be relied on unless corroborated by others who would likely be more truthful. Infants and very young Children are often very troublesome in this respect as they cannot speak or perhaps cannot use language there also it is much more reliable information we get from the parents as friends as the case may be. Children usually have great fear of Doctors (many times very justly) the first duty here should be to pacify them and gain their esteem. Parents are naturally very anxious about their Children and are very quick to note any departure from the [illegible] health and specific appearance they present.

When disorder of any organ is quite

apparent we should direct our attention immediately to it. If this is not the case - we should commence at some particular one and examine successively each one - the digestive regenerative - Spleen, liver, heart lungs, kidneys - muscular vascular and nervous system.

I have yet to describe the most important means of diagnosis so far as some of the most dangerous diseases are concerned viz. those of the chest and abdomen. Indeed their importance must now be recognised by all practitioners of medicine in diagnosing morbid conditions of nearly all the internal organs. They are - Inspection - Palpation - Pressure - Percussion - Measurement - Succussion - and Auscultation -

Inspection from the Latin inspecto a looking into is the actual observing with the eyes the various parts of the external body and their movements. In doing this we should notice whether some parts be more prominent than others, or any deprive from the natural and healthy condition of the various regions of the body. If there be any discharges from natural or unnatural outlets, we should note their quantity, quality, and ascertain how often they occur. The microscope frequently affords us very efficient in these investigations, especially when taken in connection with other symptoms. By this mode, the fauces tonsils, tongue, and palate may be examined. The former by holding down the tongue, not allowing it to be protrude

-ded- with the handle of a spoon, or any other instrument [illegible] which will answer the purpose. The finger if nothing better be at hand will answer. In children it may be done by suffering them to cry. The condition of the vagina, and rectum, may be seen by making use of a speculum. Also the os uteri.

Palpation.- (from palpo- I stroke or feel) is very useful when it is desirable to know, whether a cavity, or tumor contains fluid- or gas- or perhaps- both- and also to appreciate by the sense of touch, the hardness or softness, the smoothness or roughness or the temperature of particular parts of the body. In using this mode for the former purpose the hand should be laid, with its palmar surface downward- upon. or upon over the part- and with

The other a slight tap should be made directly opposite. If there is fluid present a slight fluctuation will be felt—this is if it is not entirely filled, and distended with the liquid. By placing a hand upon each side of the chest posteriorly and directing the patient to take a long breath, or cough or speak. The different states of the two sides may be detected if any should exist as a singular thrill or vibration of the walls will be felt. By this mode, we can also diagnose the morbid or healthy condition of the arteries, or heart. This is a most valuable means of diagnosing the existence or non-existence of pregnancy under the title of "Ballottement". In carrying the fingers into the vagina or rectum they should be well oiled to avoid irritating too much the parts, with which they may come in contact.

Pressure - from the French - presser - to press) is in itself sufficient to convey an idea of the uses to which it may be applied. We may employ here one hand or both or only the fingers, as the case may be. It is chiefly used in cases, where it is desirable to elicit symptoms from deep seated organs, or tissues which do not make themselves known either to the patient or physician - although present - as pain, tenderness, or fitting. This is a very important mode in Typhoid fever - Diarrhea - Dysentery - and in inflammation of the lining membranes of the intestines. It enables us to detect the presence, or absence of gas and fluid in cavities by giving rise to a gurgling sound - and tumors deeply seated - in the latter we should give the fingers a quick, and sudden movement

noticing whether it be displaced or not.
Percussion - from percussio (Ostrike)
is (O think) far more important than
either of the previously described modes.
and is certainly more extensively used.
The diagnosis of many and very dan-
gerous diseases would remain obscure
and uncertain - were we deprived of
this now almost necessary means
There are two modes of performing it
Mediate - and immediate - The former
is generally prefered - It is practised
by intervening some elastic solid
between the part percussed, and the fingers
used in percussing - Called - the Pleximeter.
The hand is the best and undoubtedly
the most convenient which is
a great circumstance in its favor.
besides the readiness with which
it can be adapted to the part and

So accurately - The latter mode (mine-
diate) is practiced by the direct applica-
tion of the hand to the part without any
intervening substance - The natural
resonance of the various parts of the body
should be borne in mind of course.
Else we can never appreciate mor-
bid sounds. If percussion be made
upon, as over a cavity containing
fluid, as one that has been consolida-
ted by the progress of diseased action
a dull, flat sound will be elicited
on the contrary - if over one, filled
with air a peculiar drum like
sound will be heard - the tympan-
itic - Between these there are various
intermediate sounds according to
the different morbid conditions
present. We can readily see what
a boon this is to the practicioner.

There are some rules to be observed in percussing the various parts of the body. The clothing should be removed, and a thin piece of muslin, or towel should cover the part. The patient may remain either in the recumbent posture, or sitting, or standing according to the position of the part to be examined, and the preference of the practitioner. If it is the abdomen to be percussed the muscles must be relaxed. The legs flexed upon the thigs, the latter upon the belly. Nothing but the wrist joint should be concerned in the movements of the percussing hand. The elbow joint should not modify the actions of the wrist. No force must be exerted. None is required in ordinary cases, lest we hurt, or injure the patient in some way. "Lay your hand

on gently" are the cautious and judicious words of the learned Professor, of Theory and Practice of Medicine.

Measurement. This is but little used and the chief reason of it is, that any disease, in which it could be of any practical service, can be readily detected by better, and more certain means, which we have at our command. It is mostly serviceable in demonstrating any unnatural prominence of one side of the body, more than the other. A piece of cord or tape will answer. Measure from the spinous processes to about the centre of the sternum on each side and thus compare the length of the two making allowance for the pretty general rule that the right

side of the body is more prominent and enlarged than the left owing to its more constant use.

Succussion is from succusso to shake. The only disease in which this mode is of especial benefit, is Hydropneumothorax. To give any sound the cavity must contain both fluid and gas. It is a splashing, or rushing sound. The patient is placed upon a chair in a sitting posture. The physician then stands behind him, placing one hand upon each shoulder and a shaking movement, or swaying to and fro, is executed. A very good example of this sound may be had by taking a large bottle two thirds full of water, and shake it rapidly up and down.

Auscultation from [illegible]

Listen is far superior to either of the other modes, when understood and practiced properly. Since its introduction into clinical medicine by the illustrious Laennec a new impulse has been given to medical science. This, like percussion, may be either Mediate or Immediate. Mediate auscultation is practiced by means of the stethoscope, which is placed between the body of the patient, and the ear of the auscultator. Immediate auscultation requires the ear to be put in direct apposition with the patient's body. The diseases of the chest present the most extensive field for the operation of this beautiful mode of exploration. Diseases of the lungs, and heart, are of the most vital organs in the body, which are now be easily diagnosed, and cured by

using the advantages which auscultation affords were once looked upon as necessarily fatal because of the absence of diagnostic means. In those times they were indeed fatal since they could not be discovered in the stage of incipiency when treatment is most available. But now thanks to the indomitable spirits that have gone before us, we are enabled to meet the enemy at the very entrance and command him to surrender his poisonous fang to the hands of triumphant science and energy. The sounds heard will vary of course according to the varying condition of the forts and cavities. The stethoscope is I believe not much in use except in the cases of females as the ear immediately applied is much more convenient and can be more accurately

fitted to the walls of the Chest. It also allows the examiner to be more at his ease in conducting the process, as he is not necessarily in so constrained a position. The parts should either be entirely bare as covered only by a thin piece of muslin or towel, as in percussion. Care should always be taken not to suffer sounds produced by the movements of organs, solid matters or fluids in the body to be masked by those disclosed externally in the rubbing of articles of dress together. For if this is permitted to be it may embarrass the physician in making out his diagnosis or perhaps lead him into error in regard to the case. It should be our earnest endeavor as much as possible to disconnect ourselves from the external world in conducting an investigation of this kind

Our thoughts should be concentrated upon the subject under consideration. By doing this we will aid ourselves much in this matter, which concerns the patient vitally and ourselves professionally.

There is yet, another mode, which has been but little used. It is the combination of both auscultation and percussion - Many times, information may be elicited with the two, which can not be obtained by either seperately - As in - enlargement of the spleen, liver, heart, ovaries, kidneys, or any other organ. It consists in placing a stethoscope over any suspected part - applying the ear - and tapping gently with the end of the index finger of either hand, the surrounding parts. Any enlargement will be detected by a peculiar ringing sound conveyed to the ear as

long as the finger is tapped upon the distended portion of the organ when it reaches beyond it is immediately recognized, by the absence of the above named sound - I had the pleasure of seeing these two methods united - most beautifully, and effectually - by Prof - Frick - during his attendance at the Balt - Infirmary - in the Summer of eighteen hundred and fifty-eight - in several cases -

The importance of making a correct diagnosis in treating diseases - no medical man will (I think) pretend to question It is the great sustaining pillar, upon which practical medicine rests. How can we treat diseases scientifically,

unless we know what they are, and how they may, or do affect the system: It cannot be done. And he, who lays out any other platform, by which his future course, in medical life shall be regulated, or fortified, will never be anything more, than a mere empiric - Unfortunately, there has been too much of this in medicine. It is now time that all good and right thinking men, should combine their efforts to crush out this monster of error, and needless-ness from the field of Medical Science - There should be no such thing as guess-work here - Human life is too precious a thing for such exhibitions - It behooves us to know that we are right as one step is taken.

An inaugural dissertation

on

Abortions during Labour

submitted to the examination

of

PROVOST, REGENTS,

and

FACULTY OF PHYSIC

OF

the University of Maryland

FOR THE

degree of Doctor of Medicine

by

Robert A. Dodson.

Attention During Labour

In the selection of the subject upon which I propose offering a few reflections I have been governed in my choice by the consideration of its practical importance; preferring rather to give my special attention and study, as is required of the student who proposes to write upon a given subject, to the acquisition of such information as will be most apt to profit in after life

for although we have many subjects upon the study of which the student may afford to expend especial care and persevering application yet it must be evident to the most casual observer that the study of that branch which involves so much of suffering so much of risk both to mother and child which embraces within its grasp, the consummation or frustration of the most earnest desires and anxious expectations which does or does not give assurance of the continuation of a aristocratic lineage or the retention of entailed estate, is entitled to unhonorable

position among the subjects offering themselves as worthy our consideration and pursual.
With such view of its importance, I beg to offer for your consideration, a few of the many "Attentions required at the hand of the accoucheur during labour."
The circumstance demanding our first consideration is the promptness with which we obey the summon of our patient. This is always imperatively demanded at our hand inasmuch as delay at this early period may subject the accoucheur to many inconveniences in after steps may endanger

the life of his patient, or child; or as is too frequently the case, may incur the upbraiding of the numerous circle of acquaintances, whose sympathies are all with the patient. Let us therefore be conscientiously prompt, in obeying the summons of the family.

His arrival being announced by the nurse or one of her friends he may proceed to her chamber, and cautious by avoiding any manifestation of confusion or hurry, he should endeavour by a cheerful countenance, by expressions of sympathy, cheering conversation or in fact by any well timed resort, to cause his patient to feel confidence in his ability and assurance of his

sympathy. We should [illegible] to hope for an easy and prosperous delivery. Very much of success as regards the duration of the labour may be attributed to the cheering words dropped from the mouth of the attendant, in whose word the patient has the greatest confidence.

It ought not here to be omitted to note the duty of the Physician to carry with him, or to be provided near at hand with lancet, catheter, ergot, bandages, silk, or other cord, and the other appendages occasionally demanded in attention during a variety of labours, from the fact that the one or more of them may at any time be demanded.

The agitation generally attendant upon the entrance of the accoucheur into the sick chamber being somewhat subdued, it is advisable that the physician should, through the nurse if the case be that of Primipara, or personally if he has attended during a previous labour, propose* the propriety of an examination being being made.

This announcement should in its manner be varied according as the known manners of the woman may vary, yet it is always advisable to manifest a reasonable degree of caution seeing that the patient naturally shrinks from the known necessity — Hon much more shocking to her is it, when the

*Suggest

caution is not exhibited on the part of attendant.

Previous to his examination it is his duty to see to the proper arrangement of the bed, furniture &c.

The bed should be placed on the middle of the floor, leaving room for passage around the foot and sides.

Upon a bed thus placed we may place a matrass extending well down to the foot. To the post of the foot on either side, we should have attached a towel sheet or cord something upon which the patient may hold to assist on her bearing down efforts which occur during the advanced stage of labor.

We should place an oil cloth, or one or two sheets folded upon themselves thus presenting a receptacle for the waters &c. which from time to time are discharged, and offering protection to the bed from soiling.

Previous to making an examination unless the bowels have been recently stored we give an injection; or if time for their operation remain we may give some mild laxatives of which a small dose of Magnesia or Castor-Oil are the best adapted. This precaution is of no little importance from the fact that the distention of the bowels might prove an impediment to the passage of the head. Whence

might prove an obstacle to the escape of the intestinal gases the accumulation of which is apt to bring on colic and griping pains. Aside from these considerations, we spare the woman the shame and disgust which would attend an involuntary discharge from the bowels during the last throes of of labour, as also the prevention of soiling the hands of the accoucheur or the parts of the patient subject to exposure. A little precaution may prevent much mortification and inconvenience — hence the importance of attending to this little precaution.

Everything favouring an examination we [illegible] our patient [illegible]

to lay upon her left side with her knees flexed upon the pelvis, and her pelvis well elevated.

If primipara we may commence our examination by placing our hand upon her abdomen, and manipulating for short time. The first shock to her feelings having passed away we may gradually proceed to introduce our finger into the vagina, passing the finger from behind, forward and upward, taking the precaution to anoint the forefinger well with some unctuous matter, as sweet oil, butter, lard &c.

It should be the unremitting endeavor to ascertain, 1st Whether or not the woman is pregnant. 2nd

whether she is really in labour. 3rd whether at full term. 4th whether the membranes are ruptured 5th How far labour is advanced 6th The condition of the cervix, vagina, perinæum. 7th what is the presenting part. Many, if not all of these points, may be ascertained by a careful examination, and inasmuch as such knowledge may be of vital importance to mother child, or both, the necessity of such is apparent; and the attendant is censured to duly who fails to learn from examination of these various parts.
In addition to the satisfaction derived personally, he may be enabled to communicate to the relatives and

friends the welcome intelligence that all is doing well; or if otherwise occurring, we may by timely apprizing the parties of any existing barrier to a speedy or fortunate delivery, exonerate himself from censure; the which, he might otherwise incur, even though free from neglect.

We are frequently called it on to exercise great discrimination, in order that we may satisfy the many interrogations relative to the presentation or the probable duration of the labour; and at the same time that we should by every placeable means endeavor to cheer the spirits of our patient, and quiet the anxious

appeals of the friends around. yet are we at the same time to exercise very great caution in giving a committing opinion as to the results of any given case: for nothing can be more chilling to the hopes of our patient, nothing more liable to bring upon the attendant the disapprobation of the relatives, than the non fulfillment of the unconscious prognosis and not unfrequently are the pains of the patient delayed very considerably from failing to realize as true, the promises which her attendant made in reference to the earlier stages of labour.

Let us ever bear in mind that No one can know beforehand when a

labour shall be terminated" and be governed in our prognosis accordingly.

One of the first questions to be settled in the mind of the attendant is to the nature of the pains, whether true, or false. This we may generally do by observing the features of the patient, by inquiring whether or not the pains seem to proceed from the umbilicus and loins, and pressed to, or die away about the lowermost parts of the pelvis, or perineum. The true pains are regularly intermitting - the false pains are more or less continuous, and uniform in intensity. But to the touch alone which can distinct will double, for by it we learn of the

hardness of the uterine globe - the rigidity of the os; the tension and protrusion of the membranes during the pains themselves together with the retreat and relaxation of all these parts, which are the only reliable signs demanding attention: the which occurring, fully establish the "setting in of labour;"

During the examination we may not be able to feel the presenting part on account of the action of the fibres of the os tending to left upward the body of the fetus yet at the same time we are enabled to feel the membranes which are more or less protruded according to the intensity of the contraction.

The contractions passing from the fundus downward upon the body of the fœtus, it is forced towards the os by the membranes pushing* before the presenting part, and more or less emptied of protruding waters. The part presenting will convey to the touch the impression of a substance inclosed in a capsule or envelope, rendered more or less yielding, as the quantity of liquid may vary.

Upon these pains occurring, we may expect the yielding of the cervix, which gradually enlarges as the pains increase in frequency and force.

Our first examination completed, we are to consider the propriety or impropriety of our leaving the chamber

* being pushed

of the woman. The issues of the question are to rest upon our knowledge of the females peculiarity or opinions, for it not unfrequently happens that the accoucheur finds it almost impossible to instil confidence sufficient sufficient to allow of his absence from the patient; Contrariwise the woman excited and anxious importunes the the physician not to leave her, even for the shortest time. However this may be, it is always well to bear in mind that during the parturient efforts, the patient frequently wishes to go to stool, or to urinate and that it would be best that he should adjourne to another room.

During the dilitation of the os, the attention of attendants may not be actively demanded, yet it is required that great prudence be exercised in this matter, as neglect or want of proper attention to the progress of labour may subject the woman to unnecessary suffering. If possable the attendant should better remain, if it be that the os is beginning to delate; particularly if the woman be multipara.

Relative to the conduct, employ, or attitude of the patient during the first stage of labour it is not demanded that much should be said. A change of position as

by walking, or sitting up, & will tend to render the fatigue of labour more endurable. The patient may at any time possible be permitted to sleep, or doze, as by such refreshment she will be better fitted for the succeeding stages of labour.

Equal care is requisite that our patient does not leave her bed after the dilitation of the os. or when the bag of waters presents with considerable fullness, lest she be delivered before properly placed upon her bed.

Of the various phenomena occurring during labour, none will tend to alarm the woman (if primipara) more than the rupture of the waters

therefore we should apprise our patient of the possible occurrence at any moment. This* however should in the great majority of cases be left to the work of nature, rarely should we permit ourselves to interfere in this part of labour, yet is it sometimes demanded at our hand, as in case of hemorrhage, or to secure the advantage of natural position, when the fœtus seems free in the waters &c.

The waters being ruptured, the presenting part is generally soon delivered. This is accomplished by the contraction of the Uterus and abdominal muscles, as are the after pains.

In medicine succeeding the

* rupture

delivery of the head, the Uterus frequently seems to suspend its contractions for a short time, after which interval of quiet, the delivery of the trunk and extremities is accomplished in a greater or less period of time.

During the various stages of natural labour, the accoucheur should abstain from interfering with natures efforts to rid herself of the fœtus. Meddlesome midwifery is always attended with more or less trouble, and tends to add misfortune very frequently to mother or child. However, it not unfrequently occurs that the attendant is enabled to render such assistance, as will render the

duration of the labour less, and the sufferings of the patient, more endurable. He may also render much service in those cases where* asphyxia is threatened from compression of the cord, or from mucous lodged in the fauces &c. It is his privalege as well as duty to be in readiness to meet the various contingencies which may from time to time raise.

During the progress of the labour the woman may be allowed some slight articles of nourishment, particularly if the labour has been a tedious one. Roll cracker or a cup of coffee will generally suffice.

She may also be allowed a little

* in which

wine and water, lemonade, or water sweetened according to the taste of the patient. We should allow small quantities frequently repeated, thus avoiding any unpleasant results — After the delivery of the child, we take care to remove from the bed all those clothes & which were soiled, or if the patient be too weak to allow of changing immediately, we should protect her thoroughly from contact with the damp and wet clothing. This accomplished we allow her to enjoy rest of body and mind. Great care should be exercised, lest the delivery in toto of the after birth should be overlooked.

a neglect which might involve great risk to the mother, and inconvenience to ourselves.

The mother being allowed to repose unmolested, we turn our attention to the child, the cord of which communicating during uterine life with the mother and deriving therefrom the substitute of respiration through the pulmonary organs, is to be severed immediately, upon ascertaining that, if respiration is established, and the two extremities secured by means of a ligature. This accomplished, we apply a compress upon the end of the Umbilical cord attached to the fetus and secure

it by means of a compress* applied around the abdomen of the child.

We then pass the infant, all things being favourable, to the attendant whose duty it is to see to the proper cleansing of the surface of the child and applying proper articles of clothing.

I might here add the precaution to avoid the very severe after pains which result from insufficient contraction of the Uterus upon the lochia: which is, to apply a broad bandage of muslin or flannel well up on the abdomen letting it pass around and downward, taking care to keep it from cording by rolling up.

* [illegible]

The accouchem should give attention to the condition of the womans strength after delivery, and see that she is supported by some slight article of diet, also give note to the stage of contraction of the Uterus which if imperfect &c he should assist as before directed, or that failing, by a few doses of Ergot. These attentions and others which may from time to time be demanded, having been secured to our patient and child, he may, after an hour or more according to circumstances, permit ourselves to leave the house.

An
Inaugural Dissertation
on
Hernia
Submitted to the examination
of the
Provost Regents
and
Faculty of Physic
of the
University of Maryland
For the
Degree of Doctor of Medicine
By William Hamilton Delaney
of Maryland

Hernia

This is a disorder of very frequent occurrence, about one in every eight suffering from it. Therefore underlining a thorough knowledge of its nature, and of the phenomena which it exhibits of no minor importance. It consists in a protrusion of any portion of the abdominal viscera which may be either covered or not by peritoneum through a natural or preternatural opening in any part of the abdominal parietes. From the great inconvenience

to which the patient is exposed, and from the constant danger of a fatal termination, it has elicited the attentions of Surgeons, to a very considerable extent. This attention has resulted in a confusion of ideas, which can readily be accounted for, when we consider the vast multiplication of terms resulting from detailed anatomical research. The present account will, therefore, be a comparatively brief outline. Hernia may occupy any portion of the

abdominal walls except-
ion, and that is particularly
in the line of the umbilical
cicatrix. Its most common
seats are, however, at those
parts of the abdominal pari-
=etes which give exit to
blood vessels, to the Spermatic
cord of the male, or to the
round ligament of the female.
Hernia is classified according
to its location, contents, and
portions of viscera that have
protruded. When under the
first division a tumor occa-
=sions in the groin, it is there-
=fore called an inguinal

hernia; if it contents have passed down into the scrotum, it is spoken of as scrotal hernia; if it comes down in the sheath of the femoral vessels, it is called femoral hernia; when found at or near the umbilicus, it is designated as umbilical hernia; and when passing through the abdominal walls at any other point, it constitutes ventral hernia. Certain terms, moreover are applied to varieties of hernia in accordance with the conditions in which their contents are found.

Thus, if they can be restored to the abdomen at pleasure, the hernia is said to be reducible; if this is not possible, it is said to be irreducible; and when, from any cause, an irreducible hernia is so constricted as to impede or prevent the passage of the feces and the circulation of the blood in the tumor, it is spoken of as strangulated; whilst if present at birth, it is designated as congenital hernia. The first of these, reducible hernia, is characterized by symptoms as follows:

Thus is a tumor in the abdominal parietes or on the thigh which is more marked while the patient is standing up, but which disapears when he assumes the recumbent posture, and to which coughing communicates a distinct impulse, as may be felt by placing the hand upon the tumor and directing the patient to cough, when the succussion will be readily noted. The fecal tumor is apt to be enlarged by a full meal, and to increase more or less rapidly

of flatulence, as borborygmi
or grumblings and roarings
in the bowels, particularly in
the neighborhood of the tumor,
the cause of which, being
the difficulty experienced
by the flatus in passing through
the protruded portion of
intestine. The faecal tumor
generally commences above,
and extends downwards, and,
if it attains any size, is
more or less flexuous in
its character; the size attained
finally being in some cases
cases truly immense, reaching
almost to the knees of the

patient; and seeming to contain the whole of the contents of the abdomen. If the hernia be of the scrotal variety; as it increases in size the natural organs of the scrotum disappear, and the skin becomes tense, whitish. The distention causes the penis to look like a depressed umbilicus. The diagnosis is generally easily made whether a hernial tumor contains intestine, both by the effect produced by coughing, as well as by the fact that the tumor is

more elastic, and more springy than when it contains only omentum; besides which, rumbling can occasionally be felt in the intestinal tumor, but not in that which is omental. The tumor which contains only omentum, is on the contrary more doughy and less elastic to the touch, gives less sensation upon coughing; has less tendency to tympanitis; and creates no borborygmus. Occasionally such changes take place in the hernial tumor as to prevent the protruded portion from being returned to the abdomen,

which constitutes the second stage, or irreducible hernia. Although a hernia may exist for a long time without becoming irreducible, it is liable at any time to contract such adhesions as would render it impossible to accomplish its reduction. Thus, the occurrence of adhesive inflammations between the parietal surface of the sac, and that of the intestine, this occurring most frequently at the neck, or near the mouth of the sac. Irreducible hernia may therefore at any time result from inflammation of the tumor of a reducible hernia;

from pressure upon the neck of the sac; from improper manipulation, such as the application of a truss, when the tumor is not properly reduced, from to great an amount of violence in making taxis; and in short any cause which would attract an undue amount of blood to the part, thereby setting up inflammatory actions. Every irreducible hernia has usually been reducible in the first instance, and those which are found irreducible are, therefore, generally of some weeks or months standing. Another change which takes place.

commonly after a very short time, even in the reducible hernia, is the contraction of adhesions between the hernial sac and the surrounding parts, so that although the intestine can readily be passed up into the abdomen, the sac itself still remains outside. In this case, after the surgeon has reduced any intestine or, omentum which the sac may contain, further manipulation can do no possible good, and may do harm by bruising the sac and exciting any inflammation in it that may create an abscess. After the hernia is reduced, however, it has been recommended;

to keep up a steady, though moderate pressure for some time upon the neck of the sac, and it has been asserted that adhesive inflammation has thus been produced, with the salutary effect of closing up the mouth of the sac, thus preventing the hernia from again coming down.

Either reducible or irreducible hernia may exist for years and not destroy life, and, beyond the mere inconvenience of a truss, do not seriously trouble the patient. But so long as a hernia exists in the irreducible form, or so long as it remains

reducible and not properly kept up within the cavity of the abdomen, so long is the patient exposed to strangulation and sudden death, living as if a sword were constantly suspended over him ready to fall without a moments warning.

In reducible hernia, the tumors containing intestine are generally much more readily reduced than those containing omentum; for the constriction at the neck of the sac, which is always more or less present, interfers so rapidly with the circulation in the omentum, that effusions

take place and it becomes very difficult to replace it in the abdomen.

When an intestinal hernia is so constricted as to check the passage of food along the canal, or the circulation of the blood in the protruded intestine; or when irreducible omental hernia has its circulation so interfered with as to set up an inflammation which, if unrelieved, will result in mortification, the patient is said to be suffering from the third stage or strangulated hernia. This condition of things is caused

by the symptoms peculiar to strangulated hernia, which are as follows: The first symptoms which attract attention, are pain and an uneasiness in the tumor, which pain continuing, gradually extends up into the abdomen; then he is conscious of a sense of constriction about his umbilicus, a sensation, which he speaks of as resembling a cord tied around his stomach. This is followed by symptoms of disorder of the stomach, as nausea and vomiting, the substances vomited being either bile or fecal matter, or sometimes even blood

After this his countenance soon becomes distressed, and assumes an anxious, haggard aspect, and there is marked constipation, there being nothing passed, except such portions of faeces as were in the intestines below the constricted part at the time of its strangulation, which subsequently he passes nothing by stool. During the progress of these symptoms, the pulse becomes irritable, showing that the circulation shares in the constitutional effects produced by the severe local trouble. The patient meanwhile, from excessive

pain and debility, falls into a profuse perspiration, and the vomiting returning, he begins to eject fecal matter, this being brought into the stomach by the reverse action of the peristaltic motion of the bowels above the seat of constriction. As the irritation extends to the diaphragm, he also suffers with hiccough, whilst gasses accumulating in the intestines produce more or less tympanites, and general distension of the abdomen. These symptoms having continued for a variable period, the patient begins to show signs

of prostration; with cold, hasp-
=iration, feeble, thread, or wiry
pulse, which, readily disappears
under the slightest touch. The
most marked symptom of this
condition which is now com-
=ing on, shows itself in sudden
cessation of pain in the tumor,
which, when pressed, exhibits
under the fingers, on account
of the disorganized condition
passes into the tissues, the
tumor has now ceased to
exhibit the slightest tenderness
on pressure and, changes its
color, becoming brownish and
livid. The typhoid state now-

rapidly becomes immense. There follow quickly the various symptoms of collapse and death; or in more unfortunate cases the skin, sac, and strangulated intestine, slough, and, an artificial anus is formed. This formidable disorder rarely relieved by an operation almost always terminates in death, but if death does not occur, a still more deplorable condition results, which is that of artificial anus. Strangulated hernia may be confounded with ileus, or intussusception, and with a train of symptoms not unlike those

of strangulated hernia, such as pain, and constipation, with stercoraceous vomiting, produced by a portion of the intestine becoming incarcerated, thereby diminishing its calibre; or by spasmodic contraction of its walls, so as to prevent the passage of fecal matter towards the anus. Notwithstanding these general symptoms are very similar to those of hernia, the diagnosis of hernia can often be made with facility, because in hernia a careful examination will always show a tumor.

The treatment of reducible hernia

may be divided thus, first, those means by which the hernia can be restored to the abdominal cavity: the manipulations by which this is accomplished are designated the taxis. The second indication is, to afford such support to the abdominal parietes, that will prevent the subsequent protrusion of the tumor, this is done by mechanical pressure brought to bear upon the orifice through which it escaped, this pressure being produced by means of the instrument which is well known as a truss.

The treatment of irreducible hernia resolves itself into attention to the

general health, and the use of such means as will prevent the tumor from attaining an greater size. The latter consists in the proper adaptation of a suspensory bandage, and to prevent any extraneous causes of inflammation, such as blows or pressure.

The treatment of strangulated hernia consists, first, in the cautious, and gentle employment of the taxis, for the purpose of ascertaining whether the hernia be really irreducible, this taxis should be used with great care so as not to inflict any bruise or hurt upon the tumor, and with

up inflammatory action, which would greatly diminish the prospects of success from the operation of herniotomy. After the preceding manipulations have proved unsuccessful the operation for the relief of the constricted portion of intestine should be resorted to immediately

An

Inaugural Dissertation

On Diagnosis

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for the

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by

Rufus, Sumpter, Brothers,

of

North Carolina

"Diagnosis"

Any introductory remarks on this subject would, in my mind, be wholly needless, and absurd. The importance in all cases, of forming a correct diagnosis, must become obvious to all.

No physician, would, or should, ever think, of prescribing, for a disease, the symptoms of which, he has not become acquainted with, at least in a measure. It must appear then, that the formation of a true and correct diagnosis, is of the most vital consequence to the patient, as well as also, to the reputation of the practitioner. Nothing is so well calculated to prepare, the physician for the discharge of his duty, as the ability, to rationale correctly, the

import of symptoms: to trace their various relations with each other, and to determine from them the causes, seat, nature, and extent of maladies. It is not from books alone however, that the physician can become acquainted with the signs and symptoms of diseases; he may from this source become somewhat conversant with a few of the general phenomena of diseases: but in order to familiarize himself with these phenomena, their causes, and relations with each other, he must frequent the bedside of the sick, and watch every indication, every change, and every phenomenon which the malady presents. He must

while there question the patient; in regard to the disease, with which he may be afflicted, with due reference to rules given in a subsequent portion of this thesis. It is indeed a melancholy fact that there are few, who take time, and trouble, to render themselves thoroughly acquainted, with the signs and symptoms of maladies. This accounts for the fact that there are comparitively few who are proficient in this all important branch of medical science. Diagnosis claims more attention, than the actual phenomena of disease, for the field of inquiry is much wider. It is not alone from morbid symptoms, that the intimate character and tendency of disease can always

be satisfactorily determined. Age, sex, moral and physical temperament; climate, occupation, habits of living, corporeal conformation, previous diseases, hereditary predispositions, and the character of the predisposing or exciting causes, often afford important aid, in the formation of a correct diagnosis. The manner in which a patient is examined, also has a direct and important bearing on diagnosis. A confused, disorderly, or unmethodical mode of investigating the symptoms of disease, and the various circumstances which may have contributed to determine their character, seldom leads to a clear and correct diagnosis. Again, the mode in which a physician examines his patients, affords an inconsiderable criterion for judging of his practical

qualifications. Method, regularity and deliberation, in this respect are almost always associated with skill in diagnosis, and consequently in the treatment of diseases. The first objects which strike the notice of the physician, on approaching a patient are his countenance, attitude, motions and voice. Therefore it is natural to commence the examination with these symptoms, for these in many instances are the very keys which lead to a correct and firm diagnosis. The countenance should be deliberately scanned, and any peculiarities thereon noticed. Many diseases are attended with expressions of countenance so striking that they may be at once recognized by the learned and experienced physician.

After having examined the countenance, let us turn our attention to the attitude and external conditions of the patients body, and also to the motions of the same. These must be scrutinized, and their deviations from the healthy aspect marked, the degree of emaciation, the colour and condition of the skin, and general physical habit should be observed. Nor must the observers attention be directed to any particular part exclusively, he must examine the regions of the body, separately and collectively. In some general diseases, such as scurvy, syphilis, scrofula &c. the ecchymosis glandular indurations, eruptions, blotches, ulcers, nodes &c. afford important diagnostic evidences. Old cicatrices, too must

particular attention particularly, when located
along the neck and in the groins.
The former almost always indicate a scrofulous
diathesis, whilst the latter afford good grounds
for suspecting the existence of a syphilitic
taint. Having attended to the external condit=
ion of the patients body, the examination
must be pursued by investigating the patient
and intergating him, as to the manner in
which he was attacked by the disease.
The manner in which the examination is
conducted, is of great importance.
A careless and irregular, or a finish. fulful
and impatient manner of examining,
seldom fails to lessen the good will and
confidence of the patient for his medical
attendant. Whilst a mild, deliberate, earnest

and reluctant deportment: not only gains the
patients confidence and respect: but contributes
very materially to a full development and
correct understanding of the nature of the
malady with which he may be affected.
The questions should always be proposed in
language perfectly intelligible to the patient:
and when there is reason to doubt: whether
the interrogatory has been correctly understood,
it should be repeated in different terms.
The employment of a pompous and
technical phraseology, is more apt to excite
the contempt and distrust of the
patient: than to draw forth correct and
satisfactory responses. It is necessary to
say just here, that order should be
pursued, in the investigation of

diseases, for without it many important questions are apt to be forgotten, and some which have already been asked repeated. Although the interrogatories should be sufficiently numerous and minute to obtain a full view of the symptoms and feelings of the patient, and of the circumstances of the case, as well as those which may have contributed to the development and modification of the disease. Yet irrelevant and trivial questions should be avoided. It would hardly be necessary, even if space would allow to give any caution for the investigation of maladies, the learned physician will soon acquire a habit suited to the tastes and dispositions of different patients. One of the most important items to become thoroughly acquainted with is the

great variation in the pulse.

The pulse should be deliberately and very particularly examined, and all its peculiarities and deviations from the healthy state vigilantly observed. In doing this it will be required of the practitioner to take into consideration the state of the patients general health, previous to the attack, whether he may have been weak and nervous or strong and robust.

Having ascertained the condition of the pulse, the attention should be particularly directed to the organ or part in which the primary or essential malady seems to be seated, diligence must not be made, as to those structures or organs which are known to hold the most intimate sympathetic with the part or organ principally affected. Paying attention to these

points, as well as to some others which the dormant physician will always notice, will seldom fail in forming a correct diagnosis. But there are other items of importance, which demands the notice of the practitioner; and these are the secondary diagnostic signs as presented by the countenance, the attitude and motions of the patients body, and also to the excretions. The countenance is often variedly and strikingly modified by disease, and afford in many instances highly important diagnostic indications. Thus, it has been observed that chronic disease of the spleen, is almost always attended with a remarkable bluish tinge of the lunica albuginea. This has been verified several times in the Communal Hospital. Pain, whether from spasm or inflammation, always produces a

peculiar contraction of the muscles of the face. An experienced and attentive observer can discern precisely in the peculiar contractions of the features, in what class of organs, or in what organ, the cause of the pain is seated. Thus, when the diaphragm is inflamed, the pain from the situation in which it is felt, might be supposed to be seated in the stomach, the liver or the spleen; but the peculiar grinning expression of the countenance, which attends ingenuus, or inflammation of the diaphragm, indicates at once the true seat of the disease. Pain depending on inflammation of the mucous membrane of the alimentary canal, generally gives an expression of gloom, inquietude and discontent to the countenance; and this is more

especially the case when the stomach and duodenum are affected. When the lungs are the seat of painful emotion, there is an expression of great anxiety depicted on the countenance, attended with an unusual expansion of the nostrils during each inspiration. The countenance peculiar to tubercular phthisis, is so striking, that even the most careless observer, in general readily recognizes it. The delicate paleness of the face, the circumscribed flush on the cheeks, in the afternoon; the pearly whiteness of the tunica albuginea; the glistening motion of the lips and chin in speaking, are well known as the invariable and ill-boding attendants of that dreadful scourge of humanity - Consumption.

In inflammation of the abdominal viscera, says Dr Hall "attended with severe pain, the muscles of the face are in a continued state of contraction". In organic affections of the heart; the countenance generally assumes a very peculiar expression. In cases of this kind, the palpebræ are more or less livid, the face puffy or edematous, and of a peculiar dingy hue, or suffused with a livid flush.

In hydrothorax, however, the countenance almost always exhibits a pale or livid aspect; instead of the livid flush, as common in cardiac diseases. Thus it may be seen, that scarcely a single disease, among the long list of human maladies, has not some symptoms which discloses itself in the countenance, thereby giving diagnostic evidence of its existence.

But to the signs and symptoms presented by the motions and attitude of the patient's body, when in a state of disease. It may be presumed, that both in health and in disease, that posture is assumed, which affords most repose to the system in general as well as most relief in the performance of its various functions. This then, being the healthy aspect any deviation therefrom, must indicate some morbid condition. The supine position (decubitus dorsalis), when attended with twitching of the tendons of the lower extremities, always indicate great muscular debility. When in the progress of a continued fever, we find the patient assuming this position, with the inferior extremities extended, we may presume from this symptom alone, that the disease is assuming a sinking or typhoid character.

In hydrothorax, the patient usually lies with his head and shoulders considerably elevated. When out of bed, he is often observed to sit up, with arms placed along the sides, and the hands fixed, and pressing firmly on the chair or sofa, on which he sits.

In acute abdominal inflammation the patient assumes a certain position and carefully avoids muscular exertion and changes of posture. In spasmodic pains in the abdomen on the contrary, the patient usually writhes to and fro, and constantly changes his posture. When inflammation is seated in one of the kidneys, the patient when on bed, inclines his body a little forward and to the affected side. When in the advanced stages of typhus and typhoid fever, attended with delirium, the patient is observed to keep his inferior

retention draws up, while recumbent on the back retention of urine may be expected. In most instances of inflammation of the liver, the patient cannot lie on the left side without great aggravation of his sufferings. This symptom is indeed, not always present in hepatitis, and when taken by itself, cannot be regarded as of any particular diagnostic importance. When it occurs, however in connection with other symptoms indicative of hepatic inflammation, it may be considered as of no inconsiderable evidence of the existence of this affection.

The secretions of the various organs of the body are variously modified by disease. Thus in febrile conditions we find the secretion from the liver greatly diminished. The urine in the early stage of diseases is often of small quantity and high colored.

Again the secretion of the skin may be changed by disease. There are also different kinds of secretions from the mucous membranes of the air passages, when in state of disease all indicating different diseases and different stages of the same disease. In pulmonia the tenacity of the matter expectorated is so great that we may invert the vessel which contains it and retain it in this position for some time, without detaching it from the sides. In acute bronchitis the expectoration is much less tenacious in its consistence, and is generally quite transparent, resembling the white of eggs. When the fluid expectorated has a dark appearance like clotted blood, and possesses a very fetid smell we may infer that some portion of the diseased lung is in a

gangrenous condition. In chronic bronchitis, particularly in those cases which result from phthisis, the matter expectorated often presents a white cream like appearance, having considerable resemblance to the whitish friable matter which is sometimes brought up in small quantities in the latter stage of tubercular phthisis. But there are several other points which demand attention at the hands of the physician. And these are, certain conditions of the tongue, gums, cavity of mouth, fauces and teeth. The surface of the body claims notice also, the degree of heat and moisture, and of evacuation &c. By paying attention to these points the practitioner will seldom fail in forming a correct diagnosis, this done, he has but to treat the disease accordingly.

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Degree of Doctor of Medicine

by

Frederick C Doyle

A.D. 1834

of an acute and chronic form.

I am aware I am expressing an [illegible] the [illegible] of [illegible] medical [illegible].
It is stated, [illegible] chronic [illegible] is frequently [illegible] with [illegible]. The most [illegible] [illegible] pulse, skin, tongue and appetite are affected [illegible] [illegible] also the discharges, which are frequent watery and of a pale gray color. All these are symptoms of enteritis, and since it is [illegible] difficult, may, [illegible] impossible to [illegible] one from the other, why not [illegible] it enteritis! Which it truly is [illegible] the pale watery and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of tenesmus; all indicate inflammation of the [illegible]. [illegible]

associated together; when the
attended with congestion
of the internal organs. This
congestion causes engorgement
and descending colon. Inflammation

disease is distinguished by its

other form of dysentery which

occurring, in temperate cum-

early, in during epidemics

[illegible]
[illegible]
favourably, [illegible]
[illegible] a [illegible] character,
gradually ending in a slight [illegible]
which however soon ceases.
The unfavourable symptoms are, a
continuance of the disease beyond
two weeks, a cool clammy [illegible]
a very feeble, frequent and irregular
pulse. The morbid appearances
seen after death from an ordinary
attack of dysentery, are inflammation,
thickening, and sometimes ulceration
of the mucous membrane of the
colon and rectum. I saw but
one instance where the membrane
was ulcerated. It was in the case
of a sailor, who died a few
[illegible] after being [illegible]

[illegible] of the [illegible] of the profession, as [illegible], [illegible] [illegible] [illegible].

But a great many persons, not of the profession, still look upon it as contagious. This is [illegible], the disease does often appear to be communicated from [illegible] to another; amongst those who are crowded together [illegible] attention to cleanliness and ventilation. If a proper distinction was made between the epidemic and contagious influence, [illegible] find very few diseases that are in themselves contagious.

Without doubt, it is ignorance of this distinction which has [illegible] [illegible] [illegible] [illegible] in regard to the contagious influence

[illegible] only when associated with typhus fever. There is [illegible] in which a greater number of remedies have been employed than in [illegible]. To [illegible] ally, we must take into consideration the state of the patient's system and the [illegible] of the attack. [illegible] confine [illegible] to [illegible] one set of remedies, without considering the complications which may originate with the disease. The indications in the [illegible] are, [illegible] inflammation [illegible] changes. To fulfil the [illegible] [illegible] thought necessary, [illegible]

[illegible] of the hints she affords [illegible], [illegible] would be not only an [illegible] to [illegible], [illegible] to their [illegible]. [illegible] is [illegible] of [illegible], [illegible] is [illegible] only [illegible] of [illegible], [illegible] of [illegible] may be given on the principle of [illegible] [illegible]; [illegible] of castor oil with thirty drops of laudanum [illegible]. On [illegible] cases, [illegible] of calomel, [illegible] by castor oil or sulphate of [illegible]. If the skin be hot and dry, the effervescing draught, or half a [illegible] of [illegible] and a quarter of a grain of [illegible] may be given every two or three hours. When the pain and [illegible] is

[illegible]
[illegible]
often [illegible]
action has been moderated, an [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], or [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
should be administered [illegible],
and afterwards, continued in [illegible]
doses in combination with opium
and ipecacuanha; besides these remedies,
[illegible] local remedies should not be
[illegible]
[illegible]

An
Inaugural Dissertation
on
The Lachrymal Apparatus
Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medecine
by
Alex Clendinen Jr.
Md

Gentlemen - The subject to which I would respectfully call your attention is

The Lachrymal Apparatus.

This beautiful and ingenious little apparatus constitutes one of the most important of the tutamina Oculi. Its function is to furnish a fluid with which to wash the anterior surface of the eye, thus tending to keep it in the proper degree of moisture, and to remove all foreign bodies therefrom. Its structure can easily be made intelligible, and may be devided into two sets of parts. One for the formation and pouring out of the fluid over the anterior surface of the eye, the other comprising the organs for its

excretion. The first includes the lach-
-rymal gland with its ducts the se-
cond the palpebro-lachrymal canal
the puncta lachrymalia. the lachry
mal tubes, the lachrymal sac and
the nasal duct. First we shall con-
-sider the Anatomy and Physiology
of these parts Second that branch
of Ophthalmoscopia relating to them
and thirdly treat of Fistula lachrymalis

Anatomy & Physiology

The Lachrymal Gland is oval and
lobular in shape and its size has
been compared, by some to a fil-
-bert, by others to a small almond
It is of a light pinkish or gray co-
-lor and composed of small whi-
-tish granular bodies collected into
lobes. It is situated at the upper,

outer and anterior part of the orbit, partly within that cavity and partly without, and has consequently been devided by Anatomists into two portions an orbital and a palpebrae. The Orbital portion is by far the larger and according to Wilson is about three fourths of an inch in lengthe, flattened and oval in shape, it occupies the orbital portion of the external angular proces of the frontal bone, known as the lachrymal fossa, having its upper and convex surface closely connected with the periosteum; it is in relation to the globe of the eye and the superior and inferior recti by its inferior & concave sur-

face, by its anterior to the broad tarsal ligament. The Palpebral or lesser portion of the gland is situated as the name indicates in the eye-lid and wrapt in a dense fibrous sheath, stretches from the orbital portion down to the superior margin of the tarsal cartilage. Arising from the lobes of the gland there are according to some authors six or seven others say ten or twelve ducts which running for a short distance beneath the conjunctiva (palpebral) of the upper eye-lid open near the outer angle of the Eye, immediately above the upper margin of the tarsal cartilage, nearly parallel with each other and according

to Wilson about the one-twentieth of an inch apart. These ducts are rarely visible in the human eye except under very favorable circumstances. In the horse and bullock they may be distinctly seen, are about seven in number and large enough to admit of a small probe. The Secretion of the gland poured out by these small ducts is spread over the tunica conjunctiva and is composed according to Fourcroy and Vauquelin of Mucus Muriate of Soda and Phos-phate of Lime. The saline ingredients are described as constituting only one-hundredth part, yet the taste is manifestly sal

-tish. It is stated that in those animals which live under water no lachrymal fluid is secreted. In the human eye the discharge may be excited by the direct irritation of foreign bodies particularly those of acrid properties, by various inflammatory affections, by strumous ophthalmia, by recent conjunctival inflammation but more strongly by inflammation of the internal proper tunics and by mental emotion. The gland receives its vessels and nerves by its posterior border, its arterial supply is from the lachrymal and the or-

-bital branches of the superior maxillary.

The Palpebro-lachrymal Canal

The canal to which I have ventured to give this name, because formed in most part by the palpebrae and because of use in the transmission of the lachrymal fluid is a small triangular space stretching from the outer to the inner canthus and ending in or by the lacus lachrymalis. It is formed principally by the action of the tensor tarsi muscle but assisted by the orbicularis palpebrarum, between the edges of the eye-lids (which are obliquely cut on their inner surface) and the globe of the eye. It is

formed when we wink the lids as they come together sweeping before them into the canal whatever may have accumulated on the eye. Its existance is believed by some anatomists and doubted by others. It is of course lined by a mucous membrane (conjunctiva) and serves to conduct the lachrymal fluid direct across the eye into the puncta lachrymalia, carrying before it any extraneous particles which may have lit upon the eye and also the secretions of the Meibomian glands of the commencement lachrymalis. During the state of sleep this canal is not formed in consequence

of the lids not being completely closed, and its non-existance accounts for the accumulation of the secretions of the meibomian glands & of the caruncula lachrymalis.

The Lacus Lachrymalis, so called from the fact that it is always humid, is a small triangular space left between the lids, where the inner canthus is prolonged for a short distance inwards towards the nose, leaving the globe to pass round the Caruncula Lachrymalis, a small red elevation about the size of a grain of wheat consisting of an aggregation of small glands and deri-

-ving its nervous filaments from the Infra-trochlear nerve. It is often covered with hairs and secretes a whitish humor. At the commencement of the lacus lachrymalis upon each of the two lids is a small angular projection the lachrymal papilla or tubercle, at the apices of these papillae are the Puncta lachrymalia, two minute orifices continually open and directed towards the eye: they are the commencements of the lachrymal tubes and receive the fluid conveyed by them to the sac.

The Lachrymal tubes. or ducts are two in number, dense and elastic in structure and remaining constant-

-ley often act like capillary tu-
-bes in absorbing the fluids
from the anterior surface of
the eye. They are about the
fourth of an inch in length
and pass towards the nose in
the substance of the lids
between the orbicularis palpe
brarum and the tunica con
-junctiva. The superior punc-
-tum forms an abrupt angle
by first ascending and then
-turning suddenly inwards to-
-wards the sac the inferior
first descends. then suddenly
-turns inwards. They both en-
-ter the sac about the same
point and terminate beneath a
semi-lunar fold of the lining

membrane of the Sac. They are lined by a mucous membrane and are of use as before stated in the absorption of fluids, and to convey it into the lachrymal sac.

The Lachrymal Sac is the commencement of the nasal duct, serves to contain for a time the fluid received through the puncta and (as Dr. Horner first suggested) is converted into a vacuum by the action of the tensor tarsi muscle at the same time that the lids are closed. It is lodged in the groove of the lachrymal bones and covered in and retained in its position by a sort of apon-

-rotic expansion from the ten-
-don of the orbicularis palpebrarum,
which is inserted into the ridges on
the os unguis. It is oval in shape,
about the size of a horse-bean
and lined in common with the
nasal duct by a thick pulpy mu
-cous membrane resembling in its
structure the Schneiderian mem
-brane of the nose and like it
containing numerous small mu-
-cous crypts. The lachrymal
canals are lined by a thinner
and more compact membrane
continuous with the conjunctiva
and extending up into the lachry
-mal gland. The connection thus
established between the eye
and the nose by the contin-

nity of surface in these lach-
-rymal passages often serves to pro-
-pagate inflammation and is
shown by the extension of inflam
-mation of the Schneiderian
membrane up to the conjunctiva.
The inferior extremity of the
sac is marked by a slight con-
striction or semilunar valve, com
-municating with the nasal duct.
The nervous filaments of the sac
are derived from the infra-troch
-lear nerve and the arterial bran-
-ches from the nasal artery.

Ductus ad Nasum. This is
situated in the bony canal for-
-med by the anterior half of
the os unguis and the superior
maxillary bone, is about three

fourths of an inch in length directed downwards and a little outwards to the inferior meatus of the nose, where it terminates by an expanded orifice is larger than a crow quill and lined by a mucous membrane as before stated. It is supplied with arterial branches from the inferior palpebral. Obstruction from inflammation and suppuration of this duct causes the disease called fistula lachrymalis.

Tensor Tarsi or Horner's muscle called also the lachrymal muscle, performs quite an important part in the action of the lachrymal apparatus and we shall therefore give it a place in

the description. It lies on the orbital surface of the lachrymal sac arises from the superior posterior part of the os unguis and after advancing about the quarter of an inch devides into two slips one of which is inserted along each lachrymal duct and terminates either at or near its punctum. The action of this muscle is first to draw the lids inwards. then to direct the punctum towards the eyeball, (this I believe was first suggested by Dr Physick) and lastly by its contraction to enlarge the sac thus lessening. To create a vacuum, (Dr Horners

theory) which vacuum can be more readily filled through the puncta than the nose owing to the folds of the mucous membrane (or valves) of the sac. It contracts involuntarily every time we wink the eye, but Dr Horner has related two cases in which it was completely under the command of the will.

The following then are the conclusions which may be drawn from the preceding as the modus Operandi of the lachrymal apparatus

First the lachrymal gland at the upper and outer extremity of the eye secretes and pours out upon the conjunctiva a fluid, which has a tendency to maintain its proper

degree of moisture, second the lids are brought together by the contraction of the orbicularis palpebrarum, sweeping before them whatever substances may have lit upon the anterior surface of the eye. Third. The tensor tarsi muscle contracts creating a vacuum in the sac at the same time that it forms the palpebro-lachrymal canal and the fluid rushing along this across the eye carries with it all extraneous substances and the secretions of the meibomian glands and of the caruncula lachrymalis, through the tubes into the sac & thence is forced down the duct into the nasal fossae.

That branch of Ophthalmoscopia relating to the Lachrymal Apparatus.

In the examination of the eye with regard to the discovery of disease, the condition of the lachrymal apparatus should always be attended to. Is the globe of the eye dry or humid; does it appear constantly bathed in tears? This simple observation is often sufficient to enable us to recognize what lesions may exist.

The Lachrymal Gland. In its examination we depend on the sight and touch. Is the gland in its normal position it may be hypertrophied, and this is often coincident with

a superabundance of the secretion (tears). Sometimes we find it being thus again cancerous and in some cases containing hydatids.

The Lachrymal points and canals. These are sometimes wanting very often they deviate outwards, and do not come in contact with the globe particularly when the patient looks upwards. (this of course refers to the inferior puncta, it will be the same case if the deviation is existant in the upper, and the patient looks down / In some cases the entire lid retires from the globe to an extent scarcely perceptible; very often the lachrymal point alone has lost its relation to the globe of the eye. We should inquire, if the cause

doesnot exist in a slight and chronic inflammation of the skin like that which occurs in glandular blepharitis - When that condition of things exists, the tears accumulate between the eye-lid and the eye which is less brilliant than usual, and they run incessantly over the cheeks. The lachrymal points may be worn or ulcerated, (I have seen them says M. Desmarres) of a diameter less than usual and again five or six times larger, with disease of the ear. The lachrymal canals are sometimes obstructed by mucus, and then augmented considerably in size. Stony concretions have been extracted therefrom (see memoir on dacryolites by Desmarres Annales d'Oculist vol.

vij viij) again a polypus has been found there, and occasionally they are fringed by hairs. Sometimes they join together and do not communicate with the sac which is found filled with granulations or otherwise obliterated. It is often necessary to make an injection by the syringe, (Anel's is recommended) to make certain of the different conditions.

The Lachrymal Sac. The affections of this organ are very often not apparent and it is only by the injection that into the conduits that they can be deagnosed. Meanwhile, if the the natural depression seen below the tendon of the orbicularis muscle is replaced by a swelling, which often very slight,

becomes sometimes very decided it will be easy at once to distinguish its distention, viz a lachrymal tumour. In all those cases where the patient complains of a lamenness and the distension exists we are directed to probe slightly and skillfully on the lachrymal sac and thus often we can cause the fluids to flow back through the conduits, or passages into the nose accordingly as the communication with the nostrils still exists or is interrupted. The introduction into the canals by the nostrils of a catheter with solid sounds (of Bensoud,) is said to be useful as a diagnostic. If the stony concretions (rhinolestiles) or

foreign bodies, formed or intro-
duced in this place are the cause
of the watering of the eye. in some
cases injections should be tried in
order to satisfy ourselves if the sac
is free at the lower part. It is right
to observe the state of the nostrils
on the affected side. Swelling
of the nasal mucous membrane
polypus, granulations, constantly
recurring crusts are all enumera-
-ted as occasional causes of obstruc
-tion. At other times the mucous mem-
-brane will be pale, entirely sound
but the inferior turbinated bone
may be displaced. Fractures of
the nose, the presence of foreign
bodies, tumours of all sorts, bony
and other may concur in the disease.

element of this malady. Generally nothing is more easy to recognize than Fistula lachrymalis, nevertheless it is <u>certain</u> that the most attentive and practiced surgeon may overlook a fistula which has become <u>capillary</u> because it is concealed in one of the folds of the skin which are remarked below the tendon of the orbicularis.

Fistula lachrymalis

The lachrymal sac is liable to attacks of considerable inflammation in which the sac itself is often involved. In the course of such attacks the sac may become distended, constituting what some authors

have been pleased to call a lachrymal tumour; when this becomes engorged and packed & can not be emptied by pressure then the pain increases the skin becomes inflamed and still further distended, the symptoms of acute inflammation of the sac supervene, and lastly perforation occurs. this is the way in which the majority of true cases of Fistula lachrymalis are created, but-; x x x

+ x x x x x x x x x x x x

I had intended, Gentlemen; to have attempted the description at length of Fistula lachrymalis & all connected with it, to have given it division by Chelius & others, the different theories, the many operations and plans for its cure together with the modification in the style &c by Prof Smith but time is short and space is wanting, so respectfully

Farewell.

Balt: 14th Feby 1859.

An

Inaugural Dissertation

On Epilepsy

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Chas. C. Byrne

1859

Introduction.

It were useless to attempt to foist this thesis upon the Faculty as an original production.
I make no pretensions to originality in regard to it. On the contrary, I confess that I have drawn largely on the various authors on "Epilepsy"; and the result is plagiarism from beginning to end. If I have altered their phraseology it has only been for the worse. I have introduced no new idea— broached no new theory.
I assert this openly because I know that the Faculty are prepared to hear it. They could not expect one of my slight knowledge and limited experience to succeed where older & abler men have failed.

Such, indeed, could not have been the object of the law which requires each Candidate for graduation to write an original Thesis, and no such chimerical hope inspired my pen.

With these brief and, perhaps, unnecessary preparatory remarks, I submit this essay, praying leniency for its many faults and imperfections.

It is impossible to frame a perfect definition of Epilepsy; indeed, so various are its forms, so numerous its modifications, that no general description, even, can be given of it. Cullen defines it to be "musculorum convulsio, cum sopore." Dr. Wood furnishes a longer and more comprehensive definition: "A disease of the brain, characterized by paroxysmal attacks of convulsions, with loss of sensibility and consciousness, without fever, & followed usually by coma." But almost every one of these circumstances may in turn be wanting. There may be no convulsion; there may be but slight and transient interruption of consciousness; there may be no subsequent coma.

There are often premonitory symptoms sufficient to warn the patient of the approach of the paroxysm. Very different statements are made by authors as to the relative frequency of their occurrence. They probably occur, however, in about one half of the cases, but vary greatly both in duration and character. They may continue but for a moment, or may last for hours or even days. The following are a few of the most prominent of these precursory phenomena; viz: Headache, vertigo, drowsiness, paleness or flushing of the face, unusual elevation or depression of spirits, optical illusions, unreal sounds or odors, and a long train of the symptoms usually dependent on deranged cerebral function.

All writers on Epilepsy describe a singular phenomenon called "Aura Epileptica." Which consists in certain strange sensations, as of a stream of Cold water or Cold air, or of heat beginning in some part of the body distant from the head, as the hands or feet, thence or testicle etc. and proceeding towards the brain. When the sensation reaches the head there is an immediate loss of consciousness and the patient remembers no more. In the majority of cases, sensations are rarely experienced to which the name of Aura Epileptica can be attached.

After a longer or shorter duration of these symptoms, or suddenly without any premonition whatever, the patient falls, as if struck

down by a blow, frequently uttering a piercing, peculiar cry, which is sometimes startling and even fearful. At the moment of falling, he is seized with convulsions which are often so violent as to require the strength of several men to restrain them. The spasms usually alternate with relaxation, but some of the muscles are frequently more contracted than others, particularly those of the trunk. One side is generally more affected than the other, and the head is usually drawn to one side. The features are distorted; the face & lips are swollen and flushed or livid, the veins of the neck are turgid & the eyes are turned up so that only the whites are visible, or are fixed with

a rigid, vacant stare. The arms and legs are violently thrown about, thereby, both receiving and inflicting injury. The tongue is forcibly thrust out & is often severely bitten. Respiration is labored and difficult — there appears to be some spasmodic contraction of the glottis, and frothy mucus, often tinged with blood, issues from the mouth. The pulse is small, frequent and irregular, while the heart palpitates rapidly & sometimes tumultuously. After an uncertain but generally brief duration, the convulsive movements subside, the rigid spasm relaxes, the features become pale & shrunken, a profuse perspiration often breaks out, and nothing remains

of the previous disturbance except, perhaps, a little noise in breathing.
At length consciousness returns, though at first attended with some confusion of thought, and the patient, sitting up, or rising to his feet, looks about him with a vacant, stupefied or astonished air. This may soon pass off, and the patient return to his former state, but very frequently the fit is followed by unpleasant symptoms.

The duration of the paroxysm varies from a few moments to many hours, but the average is probably from five to twenty minutes. Attacks that are spread over three or four or more hours, generally consist of a succession of paroxysms with indistinct intervals of comatose exhaustion— there is scarcely ever

A steady perseverance of the convulsions. The symptoms which immediately follow the paroxysm are very various. Sometimes, after a short period of mental confusion, the patient returns to his former condition. Very frequently he falls into a deep sleep, and wakes up in the full possession of all his faculties. Sometimes he is affected with vertigo, headache, nausea and other unpleasant sensations, and occasionally the paroxysm is followed by temporary insanity, mania, Chorea and paralysis.
This, then, is the most severe and the most common form in which the epileptic attack occurs — Epilepsy in its full development. But there is a large class of cases in which the symptoms are more mild —

Instances often occur in which, instead of Convulsions and Coma, the attack is merely vertiginous, attended by giddiness, mental Confusion, and inability to stand, but without Complete loss of Consciousness. This is momentary, the patient immediately resumes the action in which he had been previously engaged, and is not always aware that it has been interrupted.

Epileptic attacks may occur at any period of the twenty four hours, but they very frequently take place at night, during the first sleep, and sometimes, at night only. Whether this latter circumstance has any Connection with the recumbent posture of the patient, or is owing to the tendency of the sleeping state to favor spasmodic muscular movements, is undecided;

but both observation and facts appear to favor the latter belief.

The interval between the paroxysms is not less variable than their degree of intensity. Frequently, the fits occur at very long intervals, at the distance of many years — Most commonly, they visit the sufferer at irregular periods of a few months or weeks: sometimes they are repeated at intervals of a few days: sometimes every day or night. Occasionally, the fits observe a regular period of return, but, for the most part, they are quite uncertain. Though, during the intervals between the paroxysms, epileptic persons may be apparently in the enjoyment of excellent health, still, there usually some peculiarity about them which convinces that the cerebral functions are more or less deranged.

The course of Epilepsy is generally one of deterioration. The paroxysms, if originally mild, become more severe and violent - the memory and intellectual powers become enfeebled - and sometimes positive mania or complete mental imbecility ensues. The intellectual impairment is generally, though not always, very gradual.

The cerebral change is often manifested in various effects upon the external also. The features become coarse and brutish & sensual, beauty suffers greatly both in relation to form and expression, and the gait is slouching, careless and undignified. The animal propensities are no longer under the restraint of the intellectual, and lead the patient into all manner of improprieties.

It is this tendency that renders Epilepsy so sad and fearful a disease.

With these changes, the organic functions often continue little, if at all impaired. Though the general course of Epilepsy is thus towards imbecility, it is not always so: and individuals occasionally reach a good old age without any material impairment of their mental functions. Anatomy has revealed nothing that can throw any light on the pathology of epilepsy, except to show that it is not connected essentially with any organic lesion of the brain. This organ has been found, to all appearance, healthy, in epileptic persons who have died of other diseases. It has also been found affected with every possible variety of lesion, sometimes probably the effect of the epileptic paroxysms, and sometimes the cause. When death has occurred from a recent paroxysm, the brain and meninges often greatly con-

gestion, but no lesion is exhibited, implying the existence of disease anterior to the congestive movement, which is probably simultaneous with the paroxysm. In old cases, in which death has been preceded by dementia or paralytic symptoms, the traces of chronic inflammation have been observed; as partial induration or softening, general injection and dilatation of the vessels, disease of the pineal and pituitary glands, adhesions of the membranes to the substance of the brain, thickening of the membranes & various effusion into the arachnoid cavity or the ventricles. These are probably the results rather than the causes of the epileptic disease. Other lesions, however, have been observed to which the epilepsy might be referred, as thickening of the cranium,

projections and caries of the inner table, tumors pressing on the brain etc.
The causes which predispose to epilepsy are not well understood — Dr. Bright states that they are more frequently such as affect the surface, than the deeper seated parts of the brain. Diseased states of the liver, uterus, kidneys, alimentary canal & of various other parts are often strong predisposing causes. There is no doubt that a tending to epileptic disease is frequently hereditary and the time of life also, has certainly some influence over that tendency Epilepsy is more common in early than in advanced life, and seldom originates in old age. Epileptics, it will generally be found, were affected with repeated attacks of convulsions during the period of infancy.

Sex is said to have some influence in forming a predisposition to epilepsy, but statistical reports do not go far to strengthen the belief.

The diseased condition which excites the paroxysms may be situated in the nervous centres themselves or in some other part of the body. Whatever strongly disturbs the cerebral functions may prove an exciting cause of epilepsy. Exposure to the direct heat of the Sun, and excitation from violent bodily exertion have sometimes brought on an attack. Among the most fruitful sources of the disease is excess of the stronger passions, as great terror, masturbation, excessive venery, the abuse of Alcoholic drinks & of Opium, early mental culture & a strong imitative principle, especially in girls. Also the suppression of

some habitual discharge, whether morbid or physiological, Syphilis, tubercles, and various febrile diseases, have been said to have acted as exciting causes of epilepsy.

The disease probably consists in a morbid excitability ~~& irritation~~ of the brain, and each paroxysm, in a morbid excitement or irritation.

The irritation which occasions the paroxysm is sufficient to suspend all the cerebral functions connected with the ~~Brain~~ mind, but in relation to the motor functions, is sufficient only to derange, not to abolish it. In this respect it differs from apoplexy. Habit has undoubtedly a great influence in sustaining Epilepsy. When the brain has once acted in an unnatural manner

it much more readily acts in the same manner a second time, and at length falls into the new mode of action perhaps under ordinary circumstances, without the aid of the original cause.

The diagnosis of Epilepsy is seldom difficult or obscure. The only affections with which it can be confounded are apoplexy, certain forms of hysteria, & convulsions arising from some temporary cause, as meningitis, fever, dentition etc. There can be no difficulty in distinguishing an ordinary epileptic fit, in its early stages, from Apoplexy. The violent convulsions of the former & the comparative motionless state of the latter are sufficiently diagnostic. But when the epileptic paroxysm has subsided into quiet coma, there may be more

difficulty. The foam at the mouth, the
paleness of the face, the comparative feeble-
ness of the pulse, the absence of warning, &
the previous history of the case are gen-
erally sufficient to enable the physician
to draw a just conclusion.
The affection with which the epileptic par-
oxysms are most liable to be confounded
is hysteria. It is important to be able
to distinguish them: as the one is often
curable, the other, when fully established, but too frequently bids defiance to
medicine. The most prominent dia-
gnostic symptoms are, on the part
of the epileptic paroxysm, the comparative
suddenness of the attack, the shrill
cry, the frightful distortion of the
features, the livid appearance of the
face, the foaming at the mouth, the
profound coma etc. In hysteria, the

Paroxysm generally comes on but suddenly, or if sudden, has an obvious cause, there is no loud cry at the outset, the features are seldom distorted and foam seldom appears at the lipse, the face is flushed and red, but not livid as in epilepsy, and finally, the hysterical laughter and sobbing are, when they occur, quite characteristic.

Occasional convulsions cannot be distinguished with any certainty from the epileptic, except by the circumstances which attend them.

Epilepsy is, for various reasons, not unfrequently feigned, and it sometimes becomes necessary for the physician to decide whether the case is a real or a counterfeit. In real epilepsy there is profound insensibility - in the feigned, the sensibility

remains, and may be acted on. The
Simulator will sneeze on the application
of snuff to his nose, or he will shun one
if a strong solution of Ammonia be
applied to the same organ. He will
start upon the occurrence of sudden,
loud sounds, and threats will often
overcome his fortitude. His tongue
is not bitten, and he generally selects
a convenient place for falling.
When not dependent on any permanent
organic lesion, Epilepsy may often
be cured if taken at the outset. Cures
sometimes also take place in cases
of considerable duration, and there
is no reason to despair in any case,
unless obviously connected with in-
curable organic disease or evidences
of deteriorated brain. The longer, how-
ever, the disease continues, the less,

as a genral rule, is the probability of a favorable issue. Inheritance usually gives ~~ferocity~~ obstinacy to the disease. Epileptic patients, in whom a gradual deterioration of the mind, and the occurrence of paralytic symptoms, or rigid contraction of the muscles, are observable, scarcely ever recover. The disease often undergoes amendment without obvious cause, & the patient escapes his paroxysms so long as he begins to hope they may never return; but the favorable promise is generally very illusory.

There is no one exclusive course of treatment applicable to epilepsy. It is necessary to consult the state of the system, to ascertain every irregularity of function or organization, which can have any bearing on the disease, and to apply our

remedies accordingly. The treatment divides itself into that which is adapted to the paroxysm, and that required in the intervals. In the paroxysm, we have to provide against the risk of injury from the struggles and convulsions of the patient, and if possible, to mitigate the violence, and shorten the duration of the fit. The patient should be placed upon a bed, his neck cloth or any ligatures about his person should be loosened, and his head should be somewhat elevated. A piece of cork or soft wood should be placed between his teeth, to prevent him from biting his tongue, and the air of the chamber should be fresh and pure. Depletory measures, or strong impressions of

any kind are unnecessary, but. should the congestion of the brain be so great as to threaten apoplexy, it would be proper to take blood from the arm, to make cold applications to the head, and revulsion towards the extremities. Little or nothing can be done towards abbreviating the paroxysm. In protracted cases. Brain, after depletion, or when it is not organic, the happiest effects sometimes follow from Ipecacuanha given as an emetic. The internal administration of nervous stimulants, as Assafoetida & turpentine and the external application of garlic & brandy. oil of Amber mixed with Olive oil, & warm baths have been found useful when the fever is weak and the paroxysms persist. Individuals

subject to Epilepsy should not be allowed to walk alone in the vicinity of Wells, Quarries, Chalk-pits, or near precipitous places; they should not ride on horseback or in an open Carriage, and they should sleep in a bed so low that falling out would do them no injury.

During the intervals between the attacks, we seek to prevent their recurrence; and this end is to be attained, when it is attainable at all, by removing all sources of appreciable or possible irritation to the brain, & by rendering that organ less sensitive to morbid impressions or better able to resist them.

Now there are certain Causes of predisposition which we cannot remove; such are, the hereditary tendency,

the strumous diathesis, malformation of the head; the presence of some organic lesion in the brain or spinal cord. Vicious and discolute habits are also difficult, but not impossible to eradicate, and it will be the duty of the physician, when such are discovered, to set strongly before the unhappy patient, the dreadful end towards which he is hastening. Where no physical cause of the proclivity exists, or can be discovered, it is important to ascertain whether there be any deviation from the natural standard of health; towards general plethora in the one direction, or towards anemia or asthenia in the other. The first of these unnatural conditions may often be successfully treated by occasional doses of the Saline Cathartics, Confinement to a

vegetable diet, and moderate exercise.
In some instances of inordinate excitement it may be proper to take blood, but this is seldom necessary.
The second, which is, perhaps, the more common of the two, may be removed or lessened by a tonic treatment. The mineral tonics, simple bitters, Sulphate of Quinia, Nutritious diet, Cold bath, passive exercise, etc. are here indicated. Plethora is to be removed without causing too great debility, and tone is to be gained without increasing dangerous fullness. Besides the general state of health, particular sources of irritation should be attended to. All sources of gastric irritation should be removed, any existing nephritic affection should be corrected by

appropriate remedies; uterine disorders should receive especial attention, and in infants, swollen or painful gums should be lanced and local inflammation relieved. In the case of the "Anna," the application of a ligature to the limb whence the sensation proceeds, division of the nerve, and amputation of the member, have all been successfully tried. In cases of depressed or carious skull, or spicula of bone penetrating the brain, the operation of trephining has sometimes effected a cure. Should the disease be associated with syphilitic affection of the skull or pericranium, a course of mercury or iodide of potassium should be resorted to. It will be proper also, to try the effects of counter-irritation; of blisters, a seton in the neck, or some

lation by tartar emetic. Of the tonics, nitrate of silver holds, perhaps, the highest rank among the remedies for epilepsy. Many cures by this agent have been reported, and its occasional efficacy in purely functional cases of the disease cannot be doubted. It should be given at first, in doses of one third of a grain three times a day, to be gradually increased to two or three grains. The dose has been sometimes enormously increased, and a scruple has been given daily, but this abuse of the remedy may lead to serious evil. The mucous membrane of the stomach may be corroded, & a permanent dark stain be fixed upon the skin. The dose of two or three grains daily may generally be continued for the space of eight or ten weeks without

producing any unpleasant effects.
The salts of Copper are probably next in efficacy to Nitrate of Silver: either the Sulphate of Copper or the Ammoniated Copper may be used. With these preparations and with nitrate of Silver, a little opium may be usefully associated.
Of the preparations of Zinc, the Sulphate & the oxide have been used with asserted benefit. Valerianate of Zinc is said to have been used advantageously, in the dose of a grain or two several times a day, increased as the stomach will bear it. The preparations of iron may be employed with the same view.
Acetate of Lead is said to have effected permanent Cures in some cases, but it should be used with caution.
Of the vegetable tonics, Sulphate of Quinia is the principal from which

favorable effects may be expected
in functional epilepsy. Of the nervous
stimulants, valerian has probably
enjoyed most credit. Asafetida, musk
and Camphor have also been much
used. The most efficacious of the narcotics
are probably Stramonium & Belladonna.
Dr Wood has obtained the happiest effects
from a mixture of Chloroform & Camphor,
made into an emulsion with water,
by means of the yolk of an egg, in cases
of great cerebral irritation, approaching
or amounting to insanity. Among the
remedies recently introduced, indigo
has attracted considerable attention. A scruple may be given
at first, to be increased to one
or two drachms three times
daily, and the medicine must
be continued for two or three

months. Strychnia may be employed with some hope of advantage in paralytic cases. Various aromatic, stimulant, and anti-spasmodic mixtures have met with partial and temporary success.